BLUE PLANET:
PLACE, PARADOX, AND STAYING ON EARTH IN
CONTEMPORARY SCIENCE FICTION

by

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Abstract

This project examines the intersection of contemporary environmental and social anxieties present in the science fiction (sf) of the 2010s by close reading and analyzing a range of sf texts, films, and other multimedia from the decade. This study reveals that environmental and ecological preoccupations, ranging from the crisis of climate change, collapse of ecosystems, global loss of biodiversity, and their resulting human societal implications, became dominant themes of the genre over the course of the period. While the 2010s proved to be a decade overrun by environmental fatalism, the concomitant cosmic escapism proposed by figures like Elon Musk, Jeff Bezos, and Stephen Hawking, to name but a few, imagined a flight from the environmental and societal perils of Earth through the dream of colonizing outer space and Mars. However, I propose, many sf works produced during the decade often point in unexpected, paradoxical, and frequently ironic directions. This study examines sf works that, rather than revelling in humankind’s recent fascination with Mars and the stars, instead provide an alternative vision. An inherent paradox thus emerges in numerous contemporary examples of sf. I argue that stories about exploring other planets, colonizing new worlds, or fleeing the problems of home—like Andy Weir’s The Martian (2011), James Cameron’s Avatar (2009), Christopher Nolan’s Interstellar (2014), James S.A. Corey’s The Expanse series (2011–2022), and numerous others—do not support such actions. Instead, I contend, a recurring theme of sf of the 2010s is that humankind should stay home on Earth and focus on revitalizing our troubled planet and repairing human society and ourselves, rather than the rash plan of ditching our Blue Planet for Mars or some other impossible “Planet B” in outer space.
I’m not sure when I first fell in love with science fiction, but it began sometime in my childhood in the late 1980s. My parents discovered that I needed eyeglasses in preschool because I insisted that I couldn’t see the monsters in Godzilla movies or spaceships in *Star Wars* from more than a few feet from the TV screen. In some of my favorite childhood books, I boarded *The Magic School Bus* to explore outer space and time-travel to the age of dinosaurs. In the mid-1990s, I had an epiphany when my godfather loaned me his VHS stack of recorded *Star Trek* episodes. Later, my first adolescent crushes were also *Star Trek* characters—Nicole de Boer’s Ezri Dax and Jeri Ryan’s Seven of Nine, and, if I’m being totally honest, Alexander Siddig’s Dr. Julian Bashir. In college, I was introduced to other types of sf, from the b-movies of *Mystery Science Theater 3000* to classics like *Metropolis*. After graduating, I spent the summer of 2007 in a hospital recovering from a trauma-induced liver transplant, and although I was constantly surrounded and visited by family and friends, sf novels like *Shadows of the Empire* and movies like *Spaceballs* also kept me company and let me journey beyond the ICU walls.

When I decided to return to university (again) to earn a PhD a decade later, it would be for something I loved. So, I would like to start by thanking science fiction, as a genre, but also to everyone, everywhere, at any time who has strived to bring alien worlds, starships, monsters, different dimensions and spaces, or any other sf reality alive, be it with ink, pixels, celluloid, or any other medium. I would also specifically like to thank the following people: first, my wife Keri Fisher (it’s just a coincidence, Princess Leia was never the one for me) for suffering through sf movies and shows, even though she’d rather be watching
true crime or nature documentaries; my parents, Bruce and Robin Rhoads, for their constant support and helping me follow my dreams; Crystalyn Knepp, for always being there when I needed her, as both a sister and a nurse; and friends ancient, old, and relatively new, including the other members of my cohort. Finally, I would like to note my appreciation for and thank my supervisor, Molly Wallace, for her always honest and helpful feedback and suggestions, my second reader, Glenn Willmott, for his insightful comments, and the rest of my committee, Yaël Schlick, Caroline-Isabelle Caron, and Tim Blackmore. This project may be the culmination of five years of research, writing, and editing, but it is also the labor of a lifetime, and the work continues.
Table of Contents

Abstract .................................................................................................................................................. ii
Acknowledgements ................................................................................................................................. iii
List of Figures ........................................................................................................................................ vi
Introduction ........................................................................................................................................... 1
Chapter 1—Atopian Musings: Surviving on Mars in the Shadow of Climate Change in Andy Weir’s The Martian .............................................................................................................................. 17
Chapter 2—Dystopian Paradoxes: Beautiful Nature, Dark Visions, and Imagined Landscapes in Contemporary SF Cinema .................................................................................................................. 78
Chapter 3—Utopian Failures: Surviving on Basic, Terraforming Mars, and Consuming Kibble in James S.A. Corey’s The Expanse ............................................................................................................ 143
Chapter 4—Heterotopian Possibilities: Change, Diversity, and Promise on the Exoplanets of The Expanse on the Page and Screen .......................................................................................................... 204
Postscript—Space: The Final Frontier? .................................................................................................... 254
Works Cited and Consulted .................................................................................................................... 261
List of Figures

Figure 1, *Pale Blue Dot* ................................................................. 16
Figure 2, *The Martian* 28:45 ......................................................... 76
Figure 3, *The Martian* 29:00 .......................................................... 76
Figure 4, *Earthrise* .................................................................... 77
Figure 5, *The Martian* 2:11:35 .................................................... 77
Figure 6, *Avatar* 5:50 ................................................................. 138
Figure 7, *Avatar* 19:05 ............................................................... 138
Figure 8, *Avatar* 2:34:04 ........................................................... 139
Figure 9, *Interstellar* 3:58 ............................................................ 139
Figure 10, *Interstellar* 1:29:44 .................................................... 140
Figure 11, *Interstellar* 18:12 ...................................................... 140
Figure 12, *Interstellar* 1:11:14 .................................................... 141
Figure 13, *Interstellar* 1:35:38 .................................................... 141
Figure 14, *Interstellar* 2:42:21 .................................................... 142
Figure 15, *The Expanse*, “Cascade” 38:02 .................................. 252
Figure 16, *The Expanse*, “New Terra” 8:33 ............................... 252
Figure 17, *The Expanse*, “New Terra” 36:27 ............................. 253

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Introduction

“I keep forgetting that you’re still alive,” declared Elon Musk, “Bernie is a taker, not a maker” (Kolodny). Akin to all storied scientific debates, the digital mêlée between outer space entrepreneur Elon Musk and democratic socialist senator Bernie Sanders that broke out in 2021 was not without its share of witty ripostes, bon mots, and trenchant insights. Like Galileo and Pope Urban VIII, Clarence Darrow and William Jennings Bryan, or Albert Einstein and Niels Bohr, the great debate that erupted between the rumpled politician and business magnate also featured two cantankerous old white men sure of the righteousness of their respective causes, now updated for the contemporary age of social media. The quarrel started in March 2021, when the SpaceX CEO faced criticism for pompously declaring, “I am accumulating resources to help make life multiplanetary and extend the light of consciousness to the stars” (Browne). Sanders tweeted in response: “Space travel is an exciting idea, but right now we need to focus on Earth and create a progressive tax system so that children don’t go hungry, people are not homeless and all Americans have healthcare” (Woodward). It is ironic that Sanders, oft-described by critics as a pie-in-the-sky idealist, tacks a more pragmatic course than a corporate tycoon like Musk.

The impromptu Twitter brawl between Musk and Sanders encapsulates many competing ideologies, themes, and fears of the early twenty-first century. Although the interminable debates between business and government, and tax policy versus social welfare programs inform the argument, the main point of
disagreement between the two is one unique to the present-day. Sanders espouses the position that humankind should “focus on Earth,” and although the senator is most concerned with lessening inequality, an obvious and interconnected corollary to that is combating climate change, pollution, and other environmental concerns. After all, Sanders directly linked the two issues earlier, noting that “the climate crisis is not only the single greatest challenge facing [the United States]; it is also our single greatest opportunity to build a more just and equitable future” (Sanders). Contrariwise, Musk aims to “make life multiplanetary,” particularly through his own endeavors to first explore and later colonize Mars. Outlining his vision, the mogul announced, “I really think there are two fundamental paths: One path is we stay on Earth forever, and some eventual extinction event wipes us out [...] The alternative is, become a spacefaring and multiplanetary species” (Stockton). Musk and Sanders have come to represent these two competing views embedded within the cultural milieu of the long 2010s (I get to this soon), with Musk standing in for starry-eyed visionaries intent on leaving the problems of Earth for an extraterrestrial utopia, and Sanders for confronting the environmental and societal issues on our own Blue Planet rather than fleeing it for the stars.

As the climate crisis and other environmental and human perils gained in magnitude over the course of the long 2010s, so too did a popular fascination with Mars (and a possible, fantasized escape to the Red Planet). This “cosmic escapism,” as I call it—fleeing the troubles of Earth for a new home in outer space—is certainly nothing new, reappearing from time to time in the popular imagination and literature over the decades. Beginning with the “Mars mania” of the turn of the
twentieth century with texts like H.G. Wells’s “The Crystal Egg” (1897) and Edgar Rice Burroughs’s *A Princess of Mars* (1912), a reinvigorated version of cosmic escapism reached something of a fever pitch in the early decades of the twenty-first century. For example, seemingly building off the popularity of Kim Stanley Robinson’s renowned *Mars* trilogy of novels (1992–1996) that imagined the terraforming of the Red Planet, while also revealing the interplay and reverberations between literature and reality, aerospace engineer Robert Zubrin makes one of the most comprehensive cases for settling the planet in *The Case for Mars*. Zubrin’s text, also published in 1996 but revised and expanded in 2011 for the new Mars-inspired zeitgeist of the decade, declares, “Mars can be settled. For our generation and many that will follow, Mars is the New World” (xxvi). Echoing calls like Zubrin’s, prominent astrophysicist Michio Kaku opines in his 2018 bestselling *The Future of Humanity*: “To maintain a lasting presence on the Red Planet, we must find a way to create a Garden of Eden on its inhospitable landscape” (83). Such sentiments have likewise percolated into the popular mindset. Musk—who wants to send one million humans to Mars by 2050—is actively promoting and experimenting with a variety of space technologies through his company SpaceX, along with his competitors Richard Branson of Virgin Galactic, and Jeff Bezos, founder of Amazon and space corporation Blue Origin (McFall-Johnsen and Mosher).¹ None other than the esteemed cosmologist Stephen Hawking also got in

¹ The name of Bezos’s spacefaring company, Blue Origin, is a reference to our Blue Planet as humanity’s point of origin, or birthplace, rather than our home or future.
I am convinced that humans need to leave Earth. The Earth is becoming too small for us, our physical resources are being drained at an alarming rate. We have given our planet the disastrous gift of climate change, rising temperatures, the reducing of polar ice caps, deforestation, and decimation of animal species. When we have reached similar crises in our history there has usually been somewhere else to colonise. Columbus did it in 1492 when he discovered the new world. But now there is no new world. No Utopia around the corner. We are running out of space and the only places to go to are other worlds. (Kapton)

These statements and plans by visionaries like Zubrin, Kaku, Musk, and Hawking encapsulate the Mars-inspired cosmic escapism of the decade, while also openly drawing on problematic historical, religious, and colonialist themes by invoking the “Garden of Eden,” “Columbus,” the “New World,” and otherwise troublesome references and figures. According to the proponents of this movement, Earth is dying, at least some of us must leave it for at first Mars, and then later, beyond.

From its earliest beginnings in literature and film, science fiction (sf) has long proven to be transformative.\(^2\) As a generally forward-looking genre, sf has

\(^2\) In this study of genre, I follow the convention of earlier critics like Gerry Canavan in referring to both science fiction and speculative fiction simultaneously with the shorthand “sf.” Canavan argues in the preface to Green Planets, “for decades many writers and critics of science fiction have chosen to
represented transformation within its pages and frames—from technological, social, cultural, economic, sexual and gender, governmental and political, environmental, and myriad other issues and trends over the years—but the genre itself has also transformed over time. Dating back over two centuries to the transitional late-Gothic, early-nineteenth-century sf given life by Mary Shelley in *Frankenstein* (1818) to other early genre pioneers like Jules Verne, Edgar Allan Poe, and H.G. Wells, sf has proven itself a varied, adaptable, and increasingly prescient genre. With the arrival of the pulps and so-called Golden Age in the first half of the twentieth century, through the literary experimentation of the New Wave and later technosocial fears embodied in cyberpunk in the second half of the century, sf responded to and changed with the times. With the upheaval caused by the end of the Cold War and shock of 9/11, military and invasion sf gained in popularity, but by the late 2000s the responses to it were beginning to fade. A new trend in the genre came to define the 2010s: the preoccupation with environmental issues—especially the existential threat posed by global climate change. The simultaneous return of what can only be called a renewal of the “Mars mania” of over a century prior grew in fervor over the same period. As evidenced by Musk, Branson, Bezos, Kaku, Zubrin, Hawking, and others, including some of the texts and films discussed in this study, the notion that the Red Planet offers an escape from the collapse of Earth has become a recurring theme in our contemporary reality, but so has the pushback against this foolhardy idea. Intertwined within these hopes and fears—and indeed connected to them—

eschew the name ‘science fiction’ entirely, preferring ‘speculative fiction’ or (even more commonly) the ambiguous shorthand ‘sf’ as a means of avoiding the problem of ‘science’ on which the genre is nominally based” (ix).
are a variety of transformational aspects of the 2010s tied to the natural
environment and the human self, several of which I grapple with throughout this
project.

This study examines sf texts, films, and other multimedia (like TV shows and
to a small extent video games) released during what I call “the long 2010s.” I define
the long 2010s as beginning in May 2006, with the release of the documentary film
An Inconvenient Truth, written by and starring former US Vice President Al Gore,
and Gore’s companion book of the same name. An Inconvenient Truth marked a
watershed moment in the planet’s reckoning with climate change. NASA
climatologist James Hansen argues in The New York Review that “Gore may have
done for global warming what Silent Spring did for pesticides” (Hansen). An
Inconvenient Truth not only brought climate change to the silver screen, but the film
also carried the issue to the forefront of the popular mindset, launching a new era of
environmental awareness. I mark the end of the long 2010s, for the purposes of this
project, in December 2021, with the release of Adam McKay’s brutally sardonic
Netflix climate change satire Don’t Look Up, which lampoons the total inability of
humankind in general, and certain entrenched power structures and loci of
influence specifically, to confront the climate change crisis over the preceding years.
McKay’s movie envisions climate change physically in the form of an allegorical
comet incontrovertibly barreling towards Earth. Unlike, however, sf disaster
thrillers like Meteor (1979), Armageddon (1998), Deep Impact (1998), or Greenland

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3 Rachel Carson’s 1962 book Silent Spring, a study of the effect of pesticides, especially DDT, on birds and other wildlife, is widely credited with helping instigate the modern environmental movement.
(2020), the film’s scientists (played by Leonardo DiCaprio and Jennifer Lawrence) are ignored and mocked, and the movie concludes with Earth’s destruction. Writing for The Guardian, climate scientist Peter Kalmus says, “Don’t Look Up is satire. But speaking as a climate scientist doing everything I can to wake people up and avoid planetary destruction, it’s also the most accurate film about society’s terrifying non-response to climate breakdown I’ve seen” (Kalmus). The optimistic naïveté of An Inconvenient Truth (in retrospect) and wry cynicism of Don’t Look Up serve as fitting bookends for the prior decade; for a project examining environmental concerns in contemporary sf, these two vastly different yet evocative works seem more useful than defining a decade by arbitrary calendrical dates.

In this study I focus on the intersection of genre fiction and environment. The sites for these fictions are the imagined “places” of sf: atopias (“non-places”), dystopias (“bad places”), utopias (literally “no places” but in practice more “good places”), and heterotopias (“different places”). In sf, these places are often as varied as they are fantastic, ranging from the decks of sailing ships in alternate history timelines, to habitat modules and landing craft on future expeditions to Mars, to imagined exoplanets light-years distant, to weird, different realities and dimensions outside our universe. These imagined places serve as sites of criticism of our contemporary reality through sf, or what Darko Suvin calls “the literature of cognitive estrangement” (372) in his foundational study of genre theory. Combining

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4 The wealthy and politically connected elite who lobbied against dealing with the approaching comet for financial and economic reasons depart Earth shortly before the extinction-level impact and emerge from their cryogenic pods nude on a lush, Edenic exoplanet 22,740 years later. Here, McKay’s black comedy envisions the cosmic escapism plotted by Musk, Bezos, and others.
sf theory with ecocriticism, “the study of the relationship between literature and the physical environment,” a framework for analyzing the use of place in sf comes into focus (Glotfelty xviii). Gerry Canavan establishes the link between sf theory and ecocriticism in *Green Planets*, declaring: “Nowhere is the science fictionalization of the present clearer than in contemporary considerations of humanity’s interaction with its environment, which frequently deploys the language and logic of [sf] to narrativize the dire implications of ecological science for the future” (x). I use sf theory and ecocriticism to analyze environmental and human societal issues appearing in not only recent sf written texts, but also other multimedia (particularly film and television series). In sf, it is especially important to consider non-literary examples: “a study of science-fictionality should not restrict itself to one medium only […] considering the increasing weight of sf film and television in establishing the dominant cultural conceptions of what sf is […] this re-visioning will certainly hold true for computer games, as well” (Csicsery-Ronay 11). In this study, I cast a wide net over popular sf examples of the long 2010s to offer a representative sample of some of the recurring trends and themes of the decade; I focus in-depth on a few specific exemplars, offering close reading and analysis of a limited number of works rather than a more general survey. The works I cover in this project are not an exhaustive list, and there are many other possible texts, films, series, and other media that could also be considered in an expanded version of this project and discussed in this study’s conclusion.

This study is divided into chapters that consider different categories of theoretical places—atopias, dystopias, utopias, and heterotopias, respectively—and
how they reveal environmental considerations in contemporary sf of the early twenty-first century. My consideration of place is comprehensive; I include not only the natural environment in my analysis, but human-made social, political, and economic systems as well as humanity’s artificially constructed landscape.

Traditionally, in literary theory, narrative space was considered to have “no other function than to supply a general background setting [...] far less essential than the temporal directness of the plot” (Buchholz and Jahn 551). More recently, the emerging field of literary geography “started to develop lines of work that go beyond the simple association of narrative space with particular frame settings, moving towards a more complex appreciation of the ways in which text and space, fiction and location, might be understood as inseparable and co-productive” (Hones 686). The narrative space of sf texts is especially important, and in many ways different, from the historical concept of setting in other narratives. Writing in Environments in Science Fiction, Susan M. Bernardo notes the overlap between literary geography and ecocriticism vis-à-vis sf narratives and settings: “the implications of technology and human behavior for the environment [make] science fiction a perfect fit for recent ecocritical ideas about space, place, and environment as they intersect with literary theory” (Environments 1). She proceeds: “In science fiction, place is often not the same as setting in the literary sense, since place is not just an envelope for action or even a reflection of a character, but has an active part to play in science fiction narratives [...] place is a site of production and often becomes contentious” (4). In much the same way that Manhattan is considered the “fifth main character” of the award-winning HBO series Sex and the City (“New
York”), so too are the locales of sf works more like dynamic characters than static envelopes.

I have chosen to name this study *Blue Planet*. I chose this title for several reasons that I wish to discuss here. First, Earth, the “pale blue dot,” is the eponymous Blue Planet. (See Figure 1, page 16). This contrasts with the famous Mars moniker “the Red Planet,” while also conveying the paramountcy of the physical environment, especially the ocean and atmosphere, that both give our planet life and its coloration. Ecophilosopher Timothy Morton, whose sometimes controversial works and provocations appear throughout this project, nevertheless offers a useful commentary on contemporary ecological concerns, and helps to reveal the interconnectedness of humankind with our Blue Planet and its environment: “We are all burnt by ultraviolet rays. We all contain water in about the same ratio as Earth does, and salt water in the same ratio that the oceans do. We are poems about the hyperobject Earth” (*Hyperobjects* 51). Second, by entitling this study *Blue Planet*, I build on a line of other earlier sf critical texts that helped pave the way for the merging of sf theory and the study of place in genre texts. The former, *Red Planets: Marxism and Science Fiction* (2009), edited by Mark Bould and China Miéville, considers the use of fictional planets as experimental locations for new socioeconomics, particularly communism and other left-economics as well as related societal issues. The latter, *Green Planets: Ecology and Science Fiction* (2014), edited by Gerry Canavan and Kim Stanley Robinson, examines the intersection of ecocriticism and sf in contemporary texts, bringing environmental concerns, including climate change, into the sf conversation. I named this study *Blue Planet*:
Place, Paradox, and Staying on Earth in Contemporary Science Fiction to build on and resonate with the work of these two earlier anthologies, play with the similar color schema used in Robinson’s Mars trilogy (Red Mars, Green Mars, and Blue Mars), and pay homage to the ground-breaking BBC documentary series The Blue Planet (2001) and Blue Planet II (2017) hosted and narrated by naturalist Sir David Attenborough. Lastly, unlike Red Planets and Green Planets, this study focuses on only one world, Earth. Our Blue Planet is singular in multiple senses of the word; this project examines contemporary sf works that imagine futures on other worlds, while at the same time counterintuitively, either intentionally or not, emphasizing the importance of our own irreplaceable home planet.

This study opens on the imagined deserts of a future Mars in Chapter 1, “Atopian Musings: Surviving on Mars in the Shadow of Climate Change in Andy Weir’s The Martian,” which examines the bestselling 2011 novel and its 2015 blockbuster film adaptation against-the-grain. This chapter analyzes Weir’s novel, a recent popular sf text that runs counter to many of the environmental preoccupations and social transformations of the long 2010s. In The Martian, Mark Watney, a future NASA astronaut, is accidentally marooned on Mars following a devastating sandstorm, and believed dead by NASA, finds himself alone with few supplies. Watney uses his ingenuity, sheer grit, and rugged individualism to survive on the Red Planet. He lives on the atopian surface of Mars, where he farms potatoes, plunders his own resources, and tries to technologically fix (technofix) his way out of every problem with little regard for future consequences, mimicking humankind writ large on Earth today. The Martian is a space adventure story that updates the
humanity-versus-nature paradigm of the Robinsonade, but I read Weir's novel counterintuitively, examining it not as an uplifting story of human ingenuity and resourcefulness, but instead as an allegory of destructiveness and environmental collapse in a stratified and stagnant human society.

Chapter 2 moves from the near-future Ares Program of Weir's story to the bleak distant futures imagined in James Cameron's *Avatar* (2009) and Christopher Nolan's *Interstellar* (2014). Titled “Dystopian Paradoxes: Beautiful Nature, Dark Visions, and Imagined Landscapes in Contemporary SF Cinema,” this chapter analyzes two mainstream environmental sf films, both of which have been understood to be responses to the current climate crisis and human societal disintegration. To connect the environmental themes and social issues raised in these films, which both imagine futures where humanity searches for new room and more resources beyond our solar system, I examine them through this project’s recurring lenses of genre theory—their place (and their places) within sf—and ecocriticism, especially the subfield of ecofeminism. I begin with an examination of how these fictional dystopian places manifest in different, often unexpected, and many times ironic or paradoxical ways. I then examine these two popular sf films as case studies. I also discuss the recurring importance of genre and its relationship to place and environment in these films—the vibrant CGI moon Pandora in *Avatar* and the variety of gritty fictional planets in *Interstellar*—and how imagined places and spaces in sf cinema operate in a different way than sf in literature. I propose that *Avatar* and *Interstellar* both conceal hidden messages in the subtext of their narratives and audiovisual elements, presenting several layers of paradox in their
commentary on humankind’s trajectory into their imagined futures. These deeper themes include not only a direct critique of escaping the troubles of Earth for outer space but fleeing reality for a virtual alternative as well.

The final two chapters both consider James S.A. Corey’s space opera epic *The Expanse* (2011–2022) and its TV series of the same name (2015–2022). I dedicate two separate chapters to Corey’s series because it is literally expansive, comprising nine novels totalling 5093 pages, eight intercalary short stories and novellas equalling an additional 432 pages, and a sixty-two-episode television adaptation. I divide the texts both temporally and thematically between the events of the earlier novels set primarily in the Sol system from the later works that take place largely beyond the series’ imagined ring-gate wormhole on hundreds of exoplanets.

Chapter 3, “Utopian Failures: Surviving on Basic, Terraforming Mars, and Consuming Kibble in James S.A. Corey’s *The Expanse,*” examines the earlier texts of the series and its extrapolated future of humankind on Earth, Mars, and throughout the asteroids of the Belt and outer planets. In this chapter, I examine the series’ settings and consider how its locales and plot—specifically natural and artificial ecosystems and unexpected, high-impact environmental events—affect these disparate settings and the humans living on or in them. I argue that focusing on Corey’s use of place reveals not only *The Expanse*’s critical approach to utopia (and its failures), but also an environmental and sociopolitical vision with implications for a variety of issues today. I consider the extrapolated problems that arise on the failed utopias of Earth, Mars, and the Belt after climate change and other
environmental calamities force humankind to expand into outer space, revealing *The Expanse*’s sustained critique of the very cosmic escapism it envisions.

Whereas the earlier novels of Corey’s series hint through extrapolation that utopia itself is unsustainable and likely impossible, I propose that the later texts offer an allegorical blueprint and potential alternative through the diverse and renewable heterotopias of the imagined exoplanets. In Chapter 4, “Heterotopian Possibilities: Change, Diversity, and Promise on the Exoplanets of *The Expanse* on the Page and Screen,” I examine the latter works of Corey’s series, focusing on their use of fictional, impossible exoplanets within which to imagine and play with new ideas and possible alternatives to humankind’s contemporary reality on Earth today through the critical concept of heterotopia. As a corollary to this examination of the texts’ exoplanets, I offer a connected discussion of the depiction of worlds within the television adaptation of *The Expanse*, and how ideas of place and the use of CGI and other filming techniques affect the sf imaginings of not only an extrapolated future Earth, but the imaginary spaces offered by exoplanet landscapes as well. In this final chapter, I contend that Corey’s heterotopian exoplanets serve as allegorical spaces; these impossible worlds and the possibilities they promise hint towards potential alternative paths for humankind through a renewed human-environment interaction coupled with an embrace of human and biodiversity, multiculturalism, equality, inclusiveness, and the democratization of ideas and voices.

In a decade drowning in environmental fatalism and Martian dreams, the texts, films, and other media I analyze in this study often prove paradoxical, frequently ironic, and tend to point in unexpected directions. The sf examples of the
2010s that I examine, rather than revelling in humankind’s recent fascination with the stars, instead seem to offer a competing vision, whether intentionally or not. The works I consider here are but a selection of the many examples of sf of the long 2010s that warn humanity that our species is far better off focusing on our own troubled Blue Planet than seeking salvation and a new beginning in outer space, despite their extraterrestrial settings. This inherent paradox defines this emerging motif throughout numerous contemporary examples of sf—stories about exploring other worlds, settling new planets, or escaping the troubles and problems of home do not actually support such actions. Instead, I argue, a recurring theme of sf of the 2010s is that humankind should stay home on Earth and focus on revitalizing our planet and repairing our human societies and selves, rather than the foolhardy plan of fleeing our Blue Planet for some impossible “Planet B” in the barren voids of outer space.
Figure 1

(NASA)
Chapter 1

Atopian Musings: Surviving on Mars in the Shadow of Climate Change in Andy Weir’s *The Martian*

This chapter examines Andy Weir’s 2011 novel *The Martian*, a popular sf text that runs counter to the environmental preoccupations and social transformations otherwise ubiquitous throughout the sf genre during the long 2010s. I include this text not only due to its popularity in both its bestselling original novel form and later cinematic, award-winning adaptation, but also because its themes are inherently counterintuitive, revealing its impact on and interplay with the popular mindset. *The Martian* is set in the near-future (ostensibly in 2035), and thus captures the recent fascination with settling Mars such as the Mars One organization, NASA’s Artemis Program, and Elon Musk’s SpaceX Starship. In Weir’s novel (and director Ridley Scott’s 2015 film version), Mark Watney, a future NASA astronaut, is accidentally marooned on Mars following a devastating sandstorm.\(^5\) Watney, believed dead by NASA, finds himself alone on Mars with few supplies; he must use his ingenuity, resourcefulness, and sheer grit to survive on the Red Planet. On its surface, Weir’s novel seems to warn against the prospect of settling Mars—the planet is portrayed as deadly and as the novel’s antagonist. At the same time, Watney “defeats” Mars by surviving, and his reliance on his skills, science, and

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\(^5\) The sandstorm that strands Watney on Mars is physically impossible, which author Weir has widely acknowledged. NASA notes, “Even the wind of the largest dust storms likely could not tip or rip apart major mechanical equipment” (Mersmann).
technofixes seem to imply that although Mars is currently uninhabitable, the planet can nevertheless be conquered and overcome by human resourcefulness and industry at some future point. An against-the-grain reading, on the contrary, reveals deeper and more problematic aspects of the novel’s surface elements.

Weir’s novel is a space adventure based on the motif of marooned sailors on desert isles in the tradition of *Robinson Crusoe* (1719), *The Swiss Family Robinson* (1812), *Gilligan’s Island* (1964–1967), and *Cast Away* (2000), and the astronaut’s struggle “reads like a Robinsonade for the Great Recession” (Strychacz 1), wherein Watney must make survival decisions that trump all other concerns. However, a troubling environmental reading of this narrative is also possible, complicating the Robinsonade’s traditional humanity-versus-nature overtones, or what the novel’s “Reader’s Guide” supplement calls “the classic man-versus-nature battle for survival” (Weir 373). The Robinsonade genre positions the elements—such as the sandstorm that maroons Watney, his numerous declarations that Mars is trying to kill him, and his comparison of his experience to hikers lost in mountains and earthquake victims—as an adversary that must be overcome. But it also indicates that perhaps humans are better off remaining on Earth than leaving it for Mars, despite the novel’s overt romanticism attached to exploration and space travel. Although Weir’s novel appears as an inspiring and optimistic story of human resilience, an ecocritical assessment of *The Martian* reveals the problematic environmental implications of this single-minded struggle for survival. I read Weir’s novel against-the-grain, examining it not as an uplifting story of human ingenuity and community, but instead as an allegory of destructiveness and environmental
collapse in a stratified and stagnant human society. Although the novel itself reads as optimistic—perhaps even naively so—the failures that occur within its pages offer another potential countermovement and paradoxical understanding of the text. I read *The Martian* through this lens, acknowledging its overt optimism vis-à-vis technofixes and human ingenuity in the face of adversity, but consider its message allegorically and taken to its logical endgame.

*Weir’s* *The Martian* begins *in media res*, with Watney finding himself stranded alone on Mars. The narrative unfolds through epistolary narration as Watney informs the reader of his circumstances through log entries. The reader discovers that Watney is a member of NASA’s Ares 3 mission and an unknown disaster has led to his present circumstances. Over the course of novel, Watney’s log entries inform the reader of his trials and tribulations and attempts to overcome numerous setbacks and obstacles. After coming to grips with his dire situation, Watney—a botanist by training—decides to use the potatoes sent by NASA for the Ares 3 crew’s Thanksgiving meal as a source of more food by converting his Hab module into a miniature greenhouse with farmable soil. Later, he must retrofit his rover for long-distance travel and sojourn to the site of NASA’s 1997 *Pathfinder* probe to re-establish contact with Earth. After overcoming myriad problems and setbacks, Watney eventually embarks on the equivalent of a Martian road-trip to the site of the future Ares 4 MAV (Mars Ascent Vehicle), which launches him into space to be rescued by the returning Ares 3 crew. Meanwhile, interspersed with Watney’s log entries are scenes set at NASA and JPL on Earth and on the spaceship *Hermes* with the remaining Ares 3 crew, as they realize they abandoned the still-alive
Watney on the Red Planet during a Martian sandstorm. In the end, characters at NASA and JPL help Watney troubleshoot his numerous problems and mistakes while the *Hermes* returns to Mars to rescue their wayward astronaut. Scott’s film adaptation largely tracks the original novel, although it reorders events, leaves out some of Watney’s setbacks, and begins with the sandstorm event rather than revealing it slowly over the course of Watney’s log entries of his ordeal on Mars.

The importance of place should come as no surprise for a novel entitled *The Martian*. A corollary to an ecocritical examination of *The Martian* is the importance of the planet itself. Mars is of course a real place; one that is natural but inhospitable to human life. Mars, more than any other planet or place, also boasts a long and varied history (that often conflicts with scientific fact) within the sf genre, in works such as H.G. Wells’s *The War of the Worlds* (1897), Edgar Rice Burroughs’s *A Princess of Mars* (1912), Ray Bradbury’s *The Martian Chronicles* (1950), and Kim Stanley Robinson’s *Mars* trilogy (1992–1996), to name but a few examples. In this chapter, I consider Mars as an embodiment of the concept of the atopia, or “non-place,” as postulated by Siobhan Carroll in her monograph *An Empire of Air and Water* (2015). Not only do atopias offer a theoretical space for experimentation and extrapolation, but Carroll submits that such uninhabitable places are likewise interchangeable due to their fluidity, especially when present within the medium of sf. According to Carroll, who considers atopias in Victorian-era literature, in much

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6 NASA is, of course, the National Aeronautics and Space Administration headquartered in Houston, Texas, and JPL the Jet Propulsion Laboratory based in Pasadena, California.
7 Carroll’s text examines Victorian sf and British empire-building, but, coincidentally, air and water are also the two primary things Mars lacks that make it most inhospitable to life.
the same way that European colonizers looked at regions populated by non-white humans (“New Worlds” such as the Levant during the Crusades or the Americas or Australasia during the Age of Discovery) as essentially vacant “terra nullius, a ‘no person’s land’ invitingly open for colonial appropriation” (Empire 5), so too does the atopian setting of Mars offer a place for experimentation, but one ostensibly devoid of the other people, animals, plants, and other life that populated Earth’s colonized regions.

However, according to Philip Smith, the break between the problematic imaginings of colonial spaces outside Europe as blank slates versus Mars as a similar tabula rasa is not as clear as one might imagine, as Martian fictions have long offered “an idealized continuation of the American frontier, a place where the hyper-masculine and hyper-American attributes of independence, resourcefulness, and aggression might find purchase” (329). In the same way, Mars and other desolate spaces in contemporary sf offer a place where relevant contemporary issues can be explored, supposedly free from past entanglements, but not really so. As place is necessarily tied to environment and “[i]t cannot be denied that concerns about nature, its control, exploitation, and reinvention, as well as ecological fears have become very prominent in postmodern science fiction” (Podgajna 52), then space and place in the sf genre of the long 2010s hold particular relevance. Desolate, atopian places like Mars not only juxtapose with the verdant bounty of Earth by comparison—a world now under threat from myriad environmental and ecological

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8 Ray Bradbury famously quipped that “Mars is a mirror, not a crystal,” and any reader of either his The Martian Chronicles or, even more obviously, Burroughs’s A Princess of Mars, can see that the imagined Mars is in no way free of entanglements to more Earthly concerns.
crises—they also offer a theoretical space for experimentation but also “a site of masculine escapism where contemporary anxieties writ large are played out” (Smith 330). These varied and multivalent uses of place appear in the sf works covered in this and later chapters. Despite the inherent promise and potential possible on the blank canvas of Mars, however, *The Martian* instead recreates and venerates old social and environmental paradigms rather than offering new ones. What occurs here blurs the boundaries between the old sf paradigm of metaphorical Mars-escapism with the present-day reality of literal Mars-escapism. *The Martian*, problematically, offers both simultaneously, allowing readers to escape to Weir’s fictionalized Mars while also promoting the possibility of an actual place to flee Earth’s growing perils on the Red Planet.

Weir’s text serves as a preliminary example of the sf genre early in the long 2010s—the author began writing (and serializing) the novel in 2009, and it was originally self-published in 2011 before eventually being picked up by Crown Publishing in 2013 after reaching the Amazon Best Sellers List (Alter). Nearly simultaneous to Crown’s purchase of the book rights, Twentieth Century Fox optioned the novel for a film that would later assemble a talented ensemble cast led by Matt Damon. There are echoes of Weir’s own up-by-the-bootstraps story within *The Martian’s* pages, and Weir’s and Watney’s gumption, outlook, and optimism likely share more than a passing resemblance. The film became an international blockbuster, earning nearly $630 million globally and becoming Fox’s highest-grossing picture of the year and the renowned Scott’s highest-earning movie ever.
The Martian’s popularity in a variety of media reveals an interesting encapsulation of the sense of nostalgia and zeitgeist of the decade. However, concomitant with the rise of awareness of the existential threat of climate change over the course of the long 2010s, and despite the obvious question of the atmosphere (or lack thereof) in the novel and film, both manage to avoid a direct discussion of climate.

Weir also offers Watney as an archetypal “everyman” in his novel. Having Watney, a heterosexual, white, American, cisgender, male character (like Weir) stand in for humankind writ large recasts a range of traditional modes that the novel itself tends to follow. This, however, also proves problematic and anachronistic (or perhaps just out-of-touch) for a decade that was partly defined by a variety of social movements that pushed back against just such aspects of the patriarchy and American hegemony. Smith observes: “The Martian arrived […] at a time when simplistic narratives of American heroism promised escape from political and ecological realities” (323). In his reading of The Martian, however, Smith fails to note some of the novel’s inherent paradoxes—it offers escape from the complexities of twenty-first century life through Watney’s embrace of science and technofixes, but steadfastly refuses to acknowledge the failure of those same tools both in the narrative or in the reality of the present-day. Smith’s critique examines Watney as a latter-day American “yeoman (a figure drawn from but distinct from

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9 British director Ridley Scott’s oeuvre dates to the late 1970s and spans a range of genres. Scott directed some of the core films of the sf canon, including Alien (1979), Blade Runner (1982), and Prometheus (2012). Scott is also responsible for numerous historical epics, ranging from Gladiator (2000) to Kingdom of Heaven (2005).
the farmer of earlier pastoral narratives) [...] exemplified in the works of St. John de Crevecoeur and Thomas Jefferson” (327). It is here that Smith’s depiction of Watney as a contemporary iteration of the American yeoman frontiersman comes into play: “While the mountain man is at peace with the land and the cowboy is at war with it, the yeoman has achieved mastery over it, shaping the land into [...] ‘the garden of the world’” (328). Whether The Martian serves as a contemporary Robinsonade or yeoman narrative (and although they are distinct genres they share many traits), both literary traditions highlight the importance of place and setting, and of humanity in conflict with the elements, at their respective cores. Although Weir’s novel finds inspiration in older narrative forms like the Robinsonade and American yeoman frontiersman, it nevertheless fails to explore many of the expected allegorical and extrapolative properties of contemporary sf, relying instead on more traditional modes.

*The Martian* is set in the near future and is not especially science fictional—it is more of a space adventure in the vein of “*Castaway* meets *Apollo 13*” (Connors) than it is a conventional sf text. In *The Seven Beauties of Science Fiction*, Istvan Csicsery-Ronay, Jr., delineates seven major commonalities and motifs of sf, one of which is the presence of a “fictive novum,” which he defines as: “a historically unprecedented and unpredicted ‘new thing’ that intervenes in the routine course of social life and changes the trajectory of history [...] an invention or discovery, whose unexpected appearance elicits a wholesale change in the perception of reality” (5–6). Perhaps the archetypal example of this novum can be found in the *Star Trek* universe: Zefram Cochrane invents and tests his warp drive, gaining the attention of
the alien Vulcans—this event combines a new invention, the ability to travel faster than light at warp speed, with a new discovery, the realization that humanity is not alone in the galaxy. Together, these twin novums weave the fabric that holds the Star Trek universe together. Unlike Star Trek and nearly every other sf work, The Martian lacks a true fictive novum. Weir chose to set his tale in the immediate future to make it more relatable and believable, and therefore the technology depicted in the story is a slight advance based on current technologies, nothing truly transformative. As a function of this near-future setting, The Martian also fails to prognosticate any future social or environmental changes, another potential source of a novum on which Weir’s text remains notably silent. This leaves the The Martian as a space adventure—an alien-world Robinsonade featuring a marooned NASA yeoman—rather than a typical sf story.

Perhaps surprisingly, however, there is a great deal of transformation between the novel and film. Although Weir’s novel and Scott’s movie share the same basic premise, storyline, characters, and setting, there are several important transformations that occur within the text as it moves from one medium to another. For example, Scott’s film continues some of the troubling colonialist and racial overtones present in Weir’s text (and has even been accused of “whitewashing” certain characters whose ethnicity remains ambiguous in the novel), while at the same time offering a new yet subtle environmental subtext totally lacking in Weir’s book. Weir offers nostalgia for the past rather than optimism for the future as a

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10 Although Cochrane’s invention and voyage have long been part of Star Trek mythology dating back to the original series episode “Metamorphosis” (1967), the events themselves were not depicted until Star Trek: First Contact (1996).
background element of his story, whereas Scott’s film adaptation magnifies this motif into an overarching and ubiquitous theme. At the same time, whereas the novel is aggressively focused on the positive aspects of science and technology without environmental considerations, the film’s visuals and imagery offer an environmentalist message notably lacking from Weir’s original text.

**The Robinsonade in Space**

For a novel lacking conventional natural settings, a deeper excavation is required to unearth environmental themes from the lifeless Martian soil and sterile NASA offices. The novel does not overtly consider or dwell on environmental issues, and the seemingly “happy ending” leaves false reassurance. Yet when viewed through an ecocritical lens, Watney’s actions and the novel’s themes are decidedly more problematic. Because Watney is forced to rely on potato farming, altering the artificial life support and climate of his Mars Lander Habitat (the Hab), and seeking out and plundering new resources and technological fixes, Weir’s novel can also be read as an allegorical retelling of humankind’s history of agriculture, industrialization, and environmental exploitation leading to the contemporary crisis of climate change. More broadly, the total lack of any intrinsic environmental considerations in a genre otherwise replete with them over the course of the long 2010s—Cormac McCarthy’s *The Road* (2006), James Cameron’s blockbuster *Avatar* (2009), N.K. Jemisin’s *Broken Earth* trilogy (2015–2017), Dennis Villeneuve’s *Blade Runner 2049* (2017), or Zeek Earl and Chris Caldwell’s *Prospect* (2018), as well as
the variety of other dystopian, utopian, and heterotopian texts and films considered in the following chapters as but a few examples—is equally revealing, and it helps to inform a positioning of Weir’s atopian novel in opposition to the prevailing generic trends of the decade.

Watney’s experience on Mars serves as an (admittedly imperfect) scale model for humanity’s history of environmental exploitation on Earth. Smith writes: “The hostile desert environment Watney confronts, cultivates, and escapes can be read as a fictional resolution to the real problem of climate change” (330). Smith then reads *The Martian’s* overt optimism onto this ecocritical analysis: “The threat that climate change presents […calls…] for figures such as Watney—resourceful yeomen who can survive in the most hostile of environments” (330). Preventing or ameliorating environmental degradation does not enter Smith’s consideration, he instead fatalistically imagines a future where humanity must survive on such a devastated Earth that it begins to resemble the red wastes of Mars, not unlike another sf work released the same year as *The Martian’s* film adaptation, George Miller’s *Mad Max: Fury Road* (2015). Although Smith notes the novel’s resonances with global warming and examines some environmental implications of the settling-the-land yeoman narrative, a close reading and ecocritical analysis of Weir’s text, along with a comparison between the novel and film, elucidates a text unexpectedly silent or even reactionary in many respects. Prior studies have examined this aspect of the novel but from economic, political, and literary vantage points rather than environmental ones. For example, Thomas Strychacz notes:
One reason for *The Martian*’s great popularity is that its fabeling advances a set of creative and even brilliant symbolic solutions to the troubles roiling the world’s post-recessionary economies [...Watney] cannot deviate for a second from his commitment to self-interested, logical, and efficient decision-making if he is to survive. (2)

Watney’s actions, however, are not limited to the realm of the economic and practical, even if they seem confined to it at first glance—there are always environmental repercussions, and they are not limited to the alien confines of Mars. Moreover, if one considers Watney’s actions on Mars as a microcosm of the human experience on Earth, as Strychacz does, the environmental price of a single-minded “battle for survival” becomes clearer. In addition to Watney’s own actions, the number of resources NASA and others pour into rescuing the wayward astronaut are as emotionally uplifting as they are financially and environmentally ruinous.

Weir’s novel proposes that human resourcefulness and technology can be used to overcome almost any burden or potential obstacle, an idea with immediate relevance to contemporary environmental concerns. The book seems especially attuned with the times in this regard, when quick technofixes to environmental calamities abound. Such visionary and unlikely projects as Ocean Cleanup’s massive marine plastic-catching device or MEG Energy’s plan to bury carbon emissions underground serve as some examples (Boffey; Bakx). There is perhaps no better archetype of the simple fixes to our contemporary environmental problems (with almost uncanny relevance to this chapter) than SodaStream, an Israeli “home
carbonation systems” company that touts its products will help consumers “save the planet.” In SodaStream’s 2020 Super Bowl commercial, for example, astronauts on Mars—with shots and a mise-en-scène clearly evoking Scott’s *The Martian* film—discover water on the surface of the Red Planet only to have one member of their party accidentally carbonate and drink it. The advertisement closes with the environmental postscript: “By 2025, SodaStream will eliminate 67 billion single-use bottles on this planet. So we won’t have to go looking for a new one” (SodaStream). Although clearly a piece of clever advertising that captures the Mars-escapism and simple technofix spirit-of-the-times, it seems unlikely that bottling one’s soda or seltzer at home will help to cure our planet’s environmental woes. Like Watney’s temporary ad hoc fixes to constant problems, contemporary environmental solutions appear aimed at solving our problems through new technologies (quick, painless technofixes) rather than changing our behaviors and preventing plastic pollution and greenhouse gas emissions at the source, or altering our behaviors in more permanent, difficult ways.

The novel’s attitude towards the physical environment recreates a trend repeated by humans throughout history—humans and human culture are prized far more than non-human nature’s own wonders. When the historic Notre-Dame de Paris cathedral burned on April 15, 2019, donations for its restoration quickly surpassed €1 billion. At the same time, massive fires raging through the Amazon rainforest, or the Australian bushfires of January 2020, or the seemingly omnipresent seasonal wildfires of western North America also garnered headlines
but far less universal support and a notably diminished outpouring of donations.

Joyce Fegan, writing for the *Irish Examiner*, notes:

No two fires are the same. What’s the difference between the Notre Dame cathedral burning down and the single largest rainforest in the world burning down? One is simply a fire, no more and no less. It’s black and white. And the other one, while still also a fire, is a kaleidoscope of complex machinations that include greed, extreme political ideologies, competing interests and corruption [...] Instead of evoking an outpouring of empathy, nostalgia and active generosity, a conflict between far-right ideologies and science-based fact erupts. (Fegan)

These competing disasters (and there can be no doubt that the Notre-Dame fire, though not on the same level as a burning rainforest or continent, is nevertheless a great loss), also represent a microcosm of a defining conflict of the 2010s—the positioning of the environmental movement and climate change science as a political issue largely rejected by populist and right-wing ideologies and embraced by liberals and progressives. This conflict is recreated in *The Martian’s* subtext, wherein human achievement and ingenuity are prized while the environmental hazards of human actions are totally ignored, in many ways evoking the classic sf of
the 1960s and 1970s including *The Martian*'s spiritual forebear, the film *Robinson Crusoe on Mars* (1964).  

The recent politicization of climate science in particular and the environmental movement generally has not always been the case, but instead encapsulates a more recent trend of the late twentieth and early twenty-first centuries. When the modern environmental movement gained widespread traction and success in the late 1960s and early 1970s it was often an issue that bridged the political divide, even in the United States. It was Republican President Richard Nixon—a lifelong anti-communist crusader—who created the Environmental Protection Agency in December 1970 (Chafe 433). Even as recently as 2007, the George W. Bush administration worked to support energy efficiency by phasing out incandescent lightbulbs; however, in 2019, fellow Republican Donald Trump decided to abandon the phaseout first adopted by Bush (Schwartz). In the final gasping weeks of the Trump administration, during the lame-duck period in December 2020, the president doubled-down on this anti-environmentalism by rescinding water-saving regulations for showerheads that had been in place since the administration of yet another Republican, George H.W. Bush, in 1992 (Kahn). This delineation of the environmental movement into competing ideological camps—with conservatives largely rejecting climate science and other ecological

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11 *Robinson Crusoe on Mars* offers a very direct recasting of Daniel Defoe’s original narrative with the setting moved from a desert isle to the Red Planet. In *Imagining Mars*, Robert Crossley observes: “The choice of California’s Death Valley for shooting the Martian scenes is inspired and the film skillfully deploys Defoe’s Crusoe story of survival by wits as a way of engendering a romance about the wilderness of Mars, but scientifically speaking it is far from authentic, with its depiction of the astronaut and his alien ‘Man Friday’ steaming oxygen out of rocks, dining on sausage-like vegetation found in a pool of water, and enjoying temperatures warm enough to go bare-chested” (9).
crises and liberals agreeing with the broad scientific consensus and supporting environmental regulation—became a dominant theme of the 2010s.

*The Martian* stands out among recent sf novels for its seemingly conscious avoidance of environmental issues that appear so prominently in other contemporary genre texts. In an interview with *The Verge*, author Andy Weir noted that he purposely tries to avoid politics in his writings:

> A lot of science fiction authors consider it a major part of storytelling to include a political message. That’s fine for them, but it’s not what I want to do. Ultimately, you can’t please everybody, but I try and write books that I like to read, and I don’t like reading stories with a political message [...] If wealth divide is the political message of the day, and you have a book about a plucky young, attractive woman who is poor and she’s fighting against a big corporation, I guarantee you there’s not going to be any revelation that she’s misguided, that the corporation is good. The plot twist will be that it’s a corporation putting profits ahead of human life. It takes away from my ability to enjoy the book, because so many possible avenues of plot are guaranteed to not happen, and I can pretty much guess the ending at that point. (Liptak)

Here, aside from displaying a rather simplistic view of literature (and writing more generally), Weir indicates that he believes the inclusion of any political message lowers his estimation of a work’s enjoyability and value. Weir fails to consider that avoiding a political message is likely impossible—by avoiding environmental
politics, one is not being apolitical; one is, instead, inherently siding with forces that consider environmental issues unimportant (or in our contemporary parlance, right-wing provocateurs that deny the existence of climate change entirely). Moreover, the intentional absence of a political message is itself an inherently political act. Weir proffers his novel *The Martian* as a form of pure escapism. Likely reacting to such criticism of his first book, Weir’s recent third novel, *Project Hail Mary* (2021), features a very Watney-like protagonist and unequivocal statements acknowledging climate change and other environmental concerns. However, *Project Hail Mary* also flips *The Martian*’s script, and rather than being saved by Earth, the American hero Ryland Grace serves as a literal white male savior when his mission to Tau Ceti literally delivers Earth and humankind from destruction.\(^\text{12}\) Unfortunately, humanity cannot escape the specter of global warming and other ecological calamities, if at all, quite as easily as Weir’s protagonist Mark Watney eventually escapes Mars’s gravity well.

**A Microcosm in a Mesocosm**

In his ecophilosophical text *Hyperobjects*, Timothy Morton argues that the scale of certain phenomena—like global warming—are difficult to understand because “they are massively distributed in space and time relative to humans” (1). This incredible scale makes hyperobjects, which include things like “the biosphere,

\(^{12}\) Putting *Project Hail Mary* into conversation with *The Martian* would lead to a fruitful comparison and discussion, something I plan to do later in an expanded version of this project.
climate, evolution, [and] capitalism” deniable and debatable: “So when climate starts to rain on our head, we have no idea what is happening. It is easy to practice denial in such a cognitive space” (100). However, despite these denials, “Hyperobjects are real whether or not someone is thinking of them” (2). In short, Morton contends that evolved apes such as Homo sapiens lack the cognitive ability truly to perceive such massive phenomena. Somehow, though, humans (at least some) can see the world, and capitalism, and global warming, and many other things, both massive and miniscule. Morton seems to think he possesses this ability, at least, and The Martian, despite its intentions, also offers a way of seeing such hyperobjects on a smaller scale. This reading relies in-part on the sf theoretical elixir to Morton’s hyperobject enigma, Frederic Jameson’s “world-reduction” (“World-Reduction” 223). In his essay, Jameson proposes the existence of a third sf mode beyond allegory (which he calls analogy) and extrapolation. He writes:

The reading we have proposed [...] is based on a principle of systemic exclusion, a kind of surgical excision of empirical reality, something like a process of ontological attenuation in which the sheer teeming multiplicity of what exists, of what we call reality, is deliberately thinned and weeded out through an operation of radical abstraction and simplification which we will henceforth term world-reduction. (Jameson, “World-Reduction” 223)

Here, world-reduction serves as a potential sf antidote to the ailment manifested by the hyperobject. The hyperobject that is too large for an evolved ape to see becomes
visible through another tool developed by Homo sapiens through sf—world-reduction. On one hand, in The Martian, Watney's actions in the Hab and on Mars serve as a microcosm (in a mesocosm) of human-environment interaction, but on the other hand human exploration and potential colonization of Mars is simply carrying environmental exploitation beyond the bounds of an ecologically degraded planet to another. Mars is just as much of a real hyperobject as Earth, after all. By reading The Martian through an ecocritical lens—paradoxically and against the grain of the novel itself—I argue that Watney’s small-scale actions within the Hab reveal human-environment interaction in a manageable size; a text about one astronaut’s struggle to survive on an alien landscape can instead be interpreted as a pedagogical lesson on humankind’s troubling history of environmental exploitation and the looming threat of climate change and other ecological calamities.

However, just as Morton portends, both the real-life Weir and the fictional Watney do indeed ignore climate change and the environmental implications of their actions. The novel remains silent on key issues. The purpose of the Ares Program, for instance, remains unstated in the text. Is it the result of new sociopolitical conditions, the spiritual successor to the Space Race between the United States and Soviet Union? China appears in the novel as a potential adversary, but in the end one that comes to NASA’s assistance (albeit somewhat for their own advantage). Is the Ares Program tied to Earth’s environmental degradation? An early reconnaissance as part of a larger, eventual colonization plan à la the Mars-escapism of the 2010s? Weir’s text does not answer these (and other) questions. Whereas the attitude of Weir’s text is focused on Watney's survival skills and
bravery in the face of interminable challenge, an ecocritical reading—which would put pressure on the political and (missing) environmental aspects of the story and so complicate Weir’s stated intent—complicates the novel’s otherwise optimistic and uplifting narrative.

In order to establish Watney’s Hab module as an allegory for Earth’s environmental issues writ small, I examine three separate threads of his struggle to survive on Mars. First, although *The Martian* is a novel set on Mars, the artificial, human-made structures of the Hab, NASA and JPL headquarters, and the spacecraft *Hermes* are its primary settings. Behind these generically constructed locales hangs the shadow of Mars, a desolate planet inhospitable to human life and itself a product of its own ancient climate change. A focus on the novel’s settings reveals surprising similarities between its artificial locations—as Siobhan Carroll’s work with atopias posits—be they on Earth, Mars, or in outer space, contributing to an understanding of the Hab as an appropriate, miniaturized stand-in for Earth. Second, I complicate Watney’s never-give-up attitude—which the novel depicts positively—by positioning it in an environmental context. Watney’s struggle for survival causes him to plunder any and all resources in his desire to live, and although this desire is very human, it is also very destructive. A close-reading of Watney’s log entries and the novel’s word choices reveals that from beneath Watney’s jocular, spirited language and determination, a more troubling human-environment analogy can be distilled. Finally, I analyze Watney’s need to begin intensive agriculture in order to supplement his NASA-provided food supply, which amounts to three hundred days of full rations and “several potatoes” (Weir 14). A corollary to this analysis is an
examination of Watney’s alterations to the Hab to make it more conducive to agriculture (and therefore more Earth-like as well). All these aspects, taken together, reveal Watney’s experience and the Hab as a human archetype and Earth microcosm, respectively.

In the end, Watney survives his ordeal. He is rescued by the returning Ares 3 crew after an immeasurable expenditure by NASA to save him and his own willingness to use everything at his disposal to survive. Despite the seemingly happy ending, the story’s implications are not necessarily uplifting. Watney may live, but to do so he is forced to flee Mars and sabotage future Ares missions by wrecking the Ares 3 Hab (which was under consideration for use by Ares 6) and purloining the Ares 4 return vehicle. His experiments with farming falter, since he is not able to survive indefinitely on his potatoes, only to extend his food supply a limited time. All his fixes and workarounds and technological safety nets eventually fail. In the novel, however, the depicted outcome is success, not failure. Watney lives, thus fulfilling the goal. However, reading the story as an ecocritical allegory, the message is bleak. Taken to its logical extreme, such an interpretation ends with humankind exhausting its technofixes and ultimately being forced to flee Earth, thus fulfilling the Mars-inspired cosmic escapism of the 2010s and proving the Elon Musks and Robert Zubrins of the world correct. Unfortunately, unlike Watney, humankind does not have another planet waiting for us. An ecocritical reading of the novel thus provides a different view of Watney’s actions: through agriculture, industry, environmental destructiveness, and the now present crisis of climate change, humankind has caused perhaps irreparable damage to Earth. Like Watney,
humanity may be able to extend our time, but will we be able to do so indefinitely? Or, like Watney, will humankind eventually be forced to flee (to some impossible, imagined world) or die as in numerous other contemporary science fiction narratives like Christopher Nolan’s 2014 film *Interstellar* or the texts of James S.A. Corey’s *The Expanse*?\(^{13}\) Although *The Martian* offers an optimistic vision of humanity’s future (Watney does survive and return home, thus fulfilling the novel’s stated goal), it does so only by repeating past mistakes, ignoring problems, circumnavigating potential pitfalls, and taking the environment and the natural world for granted as a resource to be utilized and exploited.

**Literary Atopia: Sterile Environments and Artificial Settings on Earth and Mars**

An ecocritical reading of Watney’s Hab as a microcosm of Earth is complicated by its synthetic, human-made origins. Unlike Earth, humans construct the Hab, but at the same time the artificial environment of the Hab mirrors the novel’s other settings, including those on Earth. In addition to Watney’s experiences in the Hab, the novel’s only other primary locales are the bureaucratic office complexes of NASA and JPL and the Ares Program spaceship *Hermes*.\(^{14}\) In fact, unlike numerous other contemporary science fiction works that incorporate ecological

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\(^{13}\) Both Nolan’s film and Corey’s series are examined in detail in later chapters.

\(^{14}\) NASA headquarters are located in Houston, and JPL in Pasadena, but for the film both locations were filmed in Budapest. This serves to literally highlight the aptness of Carroll’s atopian concepts, while also reinforcing the capitalistic aspects of the film industry—Budapest was undoubtedly chosen due to cost considerations and tax credits.
degradation and anthropogenic climate change into their depictions of the future or their extrapolated storyworlds (like those considered in the following chapters), *The Martian* provides no descriptions of Earth’s environmental state, as if the planet itself almost seemed not to exist, or is, at the very least, an afterthought. This reinforces the atopian qualities of Weir’s novel—whereas the dystopian, utopian, and heterotopian texts covered in later chapters necessarily rely on the importance of “place,” Weir’s “non-place” requires no such considerations. For example, at one point NASA administrator Teddy Sanders converses with JPL director Bruce Ng: “How’s the weather in California these days?” ‘I wouldn’t know,’ Bruce said. ‘I rarely see the outdoors’” (178). Although intended as a lighthearted joke about the amount of work being done to save Watney, this aside speaks to the larger missed opportunity to comment on an extrapolated future climate (or even a future environment more generally). The novel’s silence on ecological issues in a genre often preoccupied with them is deafening. Before Watney alters the Hab, the interiors of the module and NASA are uncannily similar, as both appear as sterile, climate-controlled environments cut off from their respective outside worlds. It seems almost irrelevant what planet the two spaces are set on, as Earth appears to be just as far from NASA’s headquarters as it does from Watney stranded on another planet.

*The Martian*’s settings are all different iterations of “atopia,” or “non-place,” defined as “the constructions of commercial internationalism: spaces such as global superstores, airports, corporate office buildings, and highways” (Carroll, “Lost” 127). The modular, manufactured spaces of NASA’s and JPL’s bureaucratic
headquarters and Watney’s Hab are linked by their atopian qualities. In *An Empire of Air and Water*, Carroll also extends the understanding of atopias beyond manufactured spaces to natural ones that are “‘real’ natural regions falling within the theoretical scope of contemporary human mobility, which, because of their intangibility, inhospitality, or inaccessibility, cannot be converted into the locations of affective habitation known as ‘place’” (6). Although Carroll initially discusses uncolonizable natural spaces like the open ocean or the polar regions, this understanding of atopia can equally be applied to other inhospitable yet natural atopias like outer space and the surface of Mars. In this way, every setting in Weir’s text is a form of atopia, and such spaces “can often substitute for the other, the perils of the natural atopia speaking to the agonies of the man-made non-place and vice versa” (Carroll, “Lost” 128).\(^\text{15}\) In other words, both natural and synthetic atopias are both equally without a sense of place and are equally anonymous and ambiguous. The interchangeability of these atopian spaces subsumes the NASA complex, Watney’s Hab, and Mars itself into a single form of “non-place.” Carroll’s contentions, however, share a similar blind spot to Weir’s—they are both deeply anthropocentric. In the same way that Weir only considers human issues rather than any environmental ones in his text, Carroll’s definition of atopia leaves far more than 99.99% of the known universe as a supposed non-place. Although any ontological system that defines the oceans, atmosphere, polar regions, underground, moon, Mars, other planets, other solar systems, other galaxies, and everything else

\(^{15}\) In the film, “Mars” is the only non-atopian setting. Unlike the generic offices that make up the rest of the film’s sets, the Jordanian desert *Wadi Rum* or “Valley of the Moon” served as Scott’s version of Mars.
in existence as a non-place is inherently anthropocentric, and "[e]nvironmentally-concerned authors have argued that anthropocentrism is ethically wrong and at the root of ecological crises" (Kopnina 109), Carroll’s notion of the atopia nevertheless remains instructive in examining a text that seems to subscribe to many of its underlying tenets. By using atopian places in his text, Weir avoids depicting the consequences of human-environment interaction, shunning any environmental or political message that he personally finds so troubling.

An estimation of the Hab as a mini-Earth is clarified by Watney’s “terraforming” of the Hab’s interior. In *The Martian*, the most Earth-like space is not Earth itself, but Watney's Hab. Watney works to transform the Hab into a miniature Earth, a common theme in sf texts regarding the terraforming of Mars (a concept that will explored more fully in later chapters) but on a much smaller scale. While this trope plays itself out on a planetary scale in such genre texts as Kim Stanley Robinson’s *Mars* trilogy and James S.A. Corey’s *The Expanse* series, Watney terraforms (literally “Earth-shapes”) a small part of Mars in the Hab. Watney affirms this understanding of his intent to transform the Hab into an Earth-like space: “They say once you grow crops somewhere, you have officially ‘colonized’ it. So technically, I colonized Mars” (147). Watney’s statement recreates early paradigms of Martian fiction that depict the Red Planet as a frontier space (like Burroughs’s *A Princess of Mars*, C.L. Moore’s “Shambleau,” and many of the offerings of the pulp era); it also reinforces the novel’s troubling refusal to acknowledge controversial issues, like the European colonialism and cultural imperialism that informed the earlier Martian narratives. Not only does Watney make the Hab an extension of Earth, he terraforms
it to be more Earth-like than the novel’s depiction of Earth itself. Aside from humans, the only other living things depicted in the novel are Watney’s potato plants and the bacteria in his soil. By growing potatoes and literally transforming the lifeless Martian sand into living earth, he transforms the atopian Hab into an ersatz natural, living space.

The Earth-like environment of the Hab’s interior also strongly contrasts with the Martian exterior, a place the novel depicts as barren, desolate, and deadly. Watney describes the environment outside the seemingly idyllic Hab:

Mars is a barren wasteland and I am completely alone here [...] All around me there was nothing but dust, rocks, and endless empty desert in all directions. The planet’s famous red color is from iron oxide coating everything. So it’s not just a desert. It’s a desert so old it’s literally rusting. The Hab is my only hint of civilization, and seeing it disappear made me way more uncomfortable than I like to admit. (75)

Here, Watney directly compares the Martian surface and the Hab. While Mars is an inhospitable and ancient wasteland, the Hab is an island of civilization and comfort in its midst, just as Earth is an island of safety and refuge in the desert of outer space. This is ironic, however, for the novel never seems to realize this correlation. Watney spends his time toiling to keep the Hab livable and in good repair, notes its connection to human civilization (and hence Earth), but refuses to acknowledge the obvious environmental and conservationist connection. Instead, Weir’s text remains
almost willfully ignorant of both Earth and its natural environment; although Watney's goal throughout the novel is to return “home” to Earth, the novel never bothers to depict in any detail what that “home” may be. Instead, the Hab serves as a microcosmic stand-in for Earth, but one that conflates different blank, atopian spaces that serve as references to nothing but themselves. In *The Martian*, Earth appears as nothing more than a vague idea, and the things Watney yearns to return home to are never even alluded to, let alone directly stated, avoiding an obvious potential to include an environmental perspective in the novel.

On the few occasions the novel does mention natural landscapes, like the description of Mars above, they are often depicted in a way consistent with the tradition of the Robinsonade—as a force to be struggled against with deadly implications—be they the mountains of Earth or the sand dunes of Mars. It is a sandstorm after all, a natural event, that maroons Watney on the Red Planet. Watney repeatedly declares Mars to be his enemy and thus the novel’s antagonist: “Mars keeps trying to kill me” (229). Finally, Watney conflates Martian nature with Earth’s environment, when he compares his own experience to people lost in mountain ranges or trapped by earthquake rubble: “If a hiker gets lost in the mountains, people will coordinate a search [...] If an earthquake levels a city, people all over the world will send emergency supplies” (368). Although the novel depicts this struggle against the elements in its closing pages as an uplifting sentiment of humans coming together and helping each other in times of crisis, the underlying dynamic of the statement is to place humankind and the environment in opposition. Weir himself lays this paradigm bare in the audio commentary to the film: “It was a
man versus nature story, and I wanted nature to get the first punch in” (The Martian 4:23). Here, Weir—in violent, human-oriented terms (only humans “punch,” after all)—establishes the environment as the antagonist, and makes Watney’s struggle a battle royale or street fight of humanity against nature rather than a harmonious and mutually beneficial relationship.

**Use, Misuse, and Abuse on Mars**

A significant part of the novel's emphasis on Watney's can-do spirit and irrepressible grit is his ability to use materials and resources in unconventional ways, portrayed in a positive light. Thomas Strychacz, discussing Watney's decision-making within the novel as an allegory for the economic implications of the Great Recession of 2007–2009, observes: “Watney is a rational agent par excellence and from dire necessity” (2–3). Within the novel's narrative, Watney's resourcefulness mirrors that of other shipwreck victims forced to use whatever is available to them in unconventional ways in order to survive (like the myriad contraptions and mechanisms of *The Swiss Family Robinson* or the notorious coconut-radio of *Gilligan's Island*'s Professor Roy Hinkley). However, Watney's brazen looting and ransacking of the Ares 3 mission supplies in order to support his survival instinct and be rescued echoes humankind's own insatiable desires; Watney exploits

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16 Although I define the long 2010s as starting in May 2006 with the release of *An Inconvenient Truth*, the Great Recession likewise serves as an almost simultaneous inauguration of a new and overlapping era.

17 In fact, the names "Mark Watney" and "Roy Hinkley" share certain resonances, in addition to their character similarities and shared fates as castaways.
whatever materials are available to him on Mars with parallels to humanity’s own material exploitation of Earth. His problem-solving methods cause him to develop incremental solutions for dealing with problems, then dealing with potential future problems with yet more solutions. Some of Watney’s frequent refrains are: “I have that long to figure out how to deal with this” (37) or “that’s a problem for later” (107). Rather than considering the long-term effects and results of his actions, Watney, like many humans, focuses like a laser on only his immediate concerns.

In the end, two things come together to save Watney and rescue him from Mars. First is NASA’s ability to spend prolifically to secure his rescue. Second is not only his ingenuity but his willingness to use every possible resource and technology at his disposal to survive. During his time on Mars, Watney must “loot Rover 1’s battery and install it in Rover 2” (67), “abuse […] emergency Hab material” (70), “vandaliz[e] the interior of the rover” (76), “sacrific[e] 20 liters of precious water to the dirt gods” (16), and “d[o] all kinds of rape to the MAV” (331), to list but a few examples. The novel’s word choices—loots, abuses, vandalizes, sacrifices, and rapes—emphasize the negative aspects of Watney’s actions, even though Weir uses them humorously rather than critically. Weir portrays Watney as an irreverent-yet-likeable protagonist, but nevertheless one that looks backward rather than forward and focuses solely on what Weir calls “getting the science right” (Heath).18 Like Watney, Weir himself also looks to the past—he pines for the days of the Cold War Space Race before “decades of little to no progress” and the more traditional sf of

18 This is unintentionally ironic, since, as noted previously, the novel’s most important event, the sandstorm that maroons Watney on Mars, is scientifically inaccurate and impossible.
Robert Heinlein, Isaac Asimov, and Arthur C. Clarke, his “Holy Trinity of authors” (Heath). While the novel portrays Watney's can-do attitude and never-give-up spirit as key to his survival, these traits and the ideology behind them also have a troubling connection to human exploitation of the natural environment, which the text itself fails to consider. Both Watney and NASA leave a mess on Mars, a planet that was beforehand undisturbed for literally billions of years. NASA does not give a second thought about showering the Martian surface with “a bunch of bright green ribbons” (91) that will blow around the Martian landscape for eternity just to get Watney's attention, just as the Apollo astronauts littered the moon with refuse ranging from “golf balls” and “used wet wipes” to “96 bags of urine, feces, and vomit” (Garber). Both Watney's and NASA's attitudes reflect humanity's own troubling history of abusing the environment and harvesting natural resources without consideration for either the planet or the long-term consequences.

In addition to utilizing whatever technology and material resources are available, Watney and NASA also give no regard to the monetary cost of their actions. Like the Hab canvas Watney abuses to make a giant sling to hold an extra battery (eventually leaving him short on extra Hab canvas later) or the plastic bags that he muses “cost $50,000” (31), price is irrelevant to both the astronaut and the space agency. Strychacz notes the novel’s inherent contradiction here—Watney is forced to use each and every resource to its fullest while NASA's budget seems limitless: “Weir cannot quite decide which set of strategies to recommend [...] an austerity regime or a US-stimulus sized package for the benefit of each and every person” (1). In the end, Watney's ability to use everything he can and NASA's
spendthrift ways save the astronaut, although he closes by musing on the cost of his rescue:

I think about the sheer number of people who pulled together just to save my sorry ass, and I can barely comprehend it. My crewmates sacrificed a year of their lives to come back for me. Countless people at NASA worked day and night to invent rover and MAV modifications. All of JPL busted their asses to make a probe that was destroyed on launch. Then, instead of giving up, they made another probe to resupply Hermes. The China National Space Administration abandoned a project they’d worked on for years just to provide a booster.

The cost for my survival must have been hundreds of millions of dollars. (368)

Watney focuses on all the sacrifices in time and money that it cost to save him, but he lacks a deeper consideration of the material resources provided by nature that were required to mount his rescue. Here, a contradictory message in the novel’s use of scale—first noted by Strychacz in his economic assessment—emerges. Although NASA (and Earth) can seemingly afford to save one Mark Watney at exorbitant cost, their profligacy is limited. If saving one human from environmental calamity is so difficult and expensive, how can the population of an entire planet possibly be saved if Earth becomes unlivable? Although the novel acknowledges the immense cost of Watney’s rescue, whose salvation inevitably comes at the (unstated) detriment of
everyone remaining on Earth where those resources could have been put to other, likely better, uses, the text fails to consider the larger implications of its narrative. In the end, *The Martian* remains hopefully naïve and optimistic, and it offers a message that if humanity can pull together it can accomplish tremendous tasks. This naïveté, however, also serves as its blind spot; if one thing has become clear over the course of the long 2010s, be it combating climate change or dealing with the Covid-19 pandemic, it is that human unity, be it on a local, national, or global scale, is a pipe dream. And Weir’s text refuses to even directly depict the environmental woes of the twenty-first century, let alone attempt to confront them. In this way, the novel echoes those forces that refuse to even admit to the existence of climate change—or Covid-19, for that matter—and other environmental perils, say nothing of trying to ameliorate or correct them.

**A Green Island in a Red Sea**

Watney’s reliance on the potato is especially relevant to an ecocritical reading of the novel, as the potato was not only one of the first crops domesticated by early humans, but also later provided the caloric fuel that brought an end to famine (and whose monoculture later fueled another one) and powered the agricultural and industrial revolutions after its arrival in Europe. Early in *The Martian*, one of the astronaut’s first priorities is to assess his food supplies. Weir begins his novel *in media res*, on Sol 6 (Martian day-night cycles are slightly longer than their Earth equivalents, so they are known as sols rather than days), with
Watney regaining consciousness after his crewmates have unintentionally abandoned him. The novel's first chapter concludes with Watney's assessment of his situation for the eventual reader of his logs: “If the oxygenator breaks, I'll suffocate. If the water reclamer breaks down, I'll die of thirst. If the Hab breaches, I'll just kind of explode. If none of those things happen, I'll eventually run out of food and starve to death” (7). This summation of dangers also reinforces the environment as Watney's supposed nemesis.

Following this grim calculus, Watney determines that his first order of business is not starving to death. After determining that the remaining NASA supplies will last him about a year with rationing, and that he will need to survive at least four years for rescue by the next Ares mission, Watney calculates he will need to grow a lot more food. Although he has a few options of what to grow (including peas and beans), Watney decides to focus entirely on intensive potato monoculture: “My best bet for making calories is potatoes [...] Problem is I can't grow enough of them” (17). To grow as many potatoes as possible, Watney dedicates the entire interior of the Hab to his farming endeavors and decides to intensify his farming practices:

The next thing to consider is how efficient I can be in growing potatoes. I based my crop yield estimates on the potato industry back on Earth. But potato farmers aren't in a desperate race for survival like I am. Can I get a better yield?
For starters, I can give attention to each individual plant. I can trim them and keep them healthy and not interfering with each other. Also, as their flowering bodies breach the surface, I can replant them deeper, then plant younger plants above them. For normal potato farmers, it’s not worth doing because they’re working with literally millions of potato plants.

Also, this sort of farming annihilates the soil. Any farmer doing it would turn their land into a dust bowl within twelve years. It’s not sustainable. But who cares? I just need to survive for four years. (19-20)

Here, Watney reveals his focus on intensive, short-term potato farming. He is not interested in the long-term ramifications of his actions, only on his survival. It is true that potatoes were never meant to grow on Mars, but the larger implications of Watney’s actions are nevertheless environmentally relevant.19 Watney’s statement, “But who cares?,” troublingly replicates a common human refrain: the world’s oceans are dying but I do not eat seafood, so who cares? I like inexpensive furniture made with exotic wood even though the tropical rainforests are being destroyed, so who cares? Climate change will not be a problem in my lifetime, so who cares? The massive scale and temporal distance of the problems—their hyperobject attributes—make them difficult matters for most humans, Weir and Watney included, to grasp.

19 The Netflix sf satire series Space Force (2020–2022) seems to mock Watney’s and The Martian’s potato obsession. In the episode “Lunar Habitat,” the characters suffer from severe malaise and ennui after living on nothing but potatoes for two years in their lunar habitat simulation experiment.
In his essay “She Stood in Tears Amid the Alien Corn,” Morton describes the troubling history of humanity’s domestication of plants and animals. This process, which contributed to a variety of ills like “patriarchy, the impoverishment of all but a very few, a massive and rigid social hierarchy, and feedback loops such as plagues” also caused the current climate crisis through the 11,000 year process that Morton dubs “agrilogistics” (92). Like Watney’s decision to sacrifice everything for his own survival, humankind made the same calculation when adopting agriculture. Morton writes:

This idea of constant presence goes along with an implicit utilitarianism, according to which I decide that having more beings like me, existing for longer, is better than anything else […] This mistake now plays out at the temporal scale of climate change. This is because agrilogistics supplied the conditions for the Agricultural Revolution, which swiftly provided the conditions for the Industrial Revolution. (93)

Morton argues that the choice made by ancient humans living in early civilizations to adopt agriculture and animal domestication has led inexorably over millennia to humankind’s current existential crises. Morton’s argument here—although well-

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20 Morton’s concept of agrilogistics tends to read all humans as part of the same cloth, failing to differentiate between regions, periods of history, environments, et cetera. Not all humans everywhere throughout all time share equal responsibility for humanity’s current predicament. Morton also commits an ahistorical error by assuming that the developmental path that did occur was the only possible option. History, as a field of study, does not abide predestination. Other possibilities than the one that did occur may have occurred, the path humanity followed was not the only possible one.
argued and generally convincing—is also something of a teleological hyperobject of its own. Was the human race predestined to arrive at climate change from the moment the people of Abu Hureyra first intentionally planted rye? Morton argues yes. Interestingly, “the primary trigger [for transitioning to agriculture...] was climate change,” an interruption of the end of the Ice Age known as the Younger Dryas, bringing the connection between agriculture and climate change full-circle (Hillman et al. 383). Regardless, whether humanity, lumped together as Morton does, was predestined or not to eventually trigger global warming throughout the history of our species (and history generally does not assume that the path taken was the only possibility), we have nevertheless arrived at this juncture. Weir (unintentionally) recreates many of these same conditions in his text. The Martian, an example of hard science fiction, is especially poignant and revealing because it is so realistic—a NASA experiment determined Watney’s method for farming on Mars “might be possible” (Mosher). Reading Watney’s actions in the Hab as an analogue for human activities on Earth shines a light on troubling human tendencies depicted by Weir from a new vantage point.

Watney’s reliance on potato monoculture reinforces this ecocritical understanding of The Martian vis-à-vis climate change. Potatoes, as Watney notes, are a superior source of calories compared to most other crops, and it is true that “the lowly potato gave rise to modern industrial agriculture” enabling Europe to achieve food security and a population boom that supplied the necessary labor for the Industrial Revolution (Mann). The history of the potato, however, is far more nuanced than this statement implies, as the crop was first domesticated in the
Andes, then later “discovered” and taken to Europe, and later, although it helped fuel the Industrial Revolution, was also itself the source of famine (through no fault of its own), when extensive potato monoculture contributed to the severity of the potato blight throughout Europe, particularly in Ireland. Industrialization, of course, began the process of emitting carbon dioxide and other greenhouse gases into Earth’s atmosphere on a massive scale, leading to global warming.

To farm inside the Hab, Watney is forced to dramatically alter its environment, making it more Earth-like. Watney transports Martian soil through the airlocks to cover the floor and makes 504 liters of water to add to the Hab’s environment (Weir 16). Finally, to increase his potato yield, Watney tinkers with the Hab’s atmosphere and climate to provide ideal growing conditions. By making extensive transformations to survive, Watney stresses the Hab by demanding it give him more than it was ever designed to do. Watney’s uses (and abuses) of the module lead to its eventual deterioration and rupture, abruptly ending Watney’s experiment with farming and almost killing him in the process.

The first step in Watney’s transformation of the Hab is transporting and creating farmable soil. These extra trips stress the airlock and lead to its eventual failure:

\[\textit{Designed for a mission of thirty-one sols, AL102 continued well past its planned expiration. Sol and sol went by, with the lone astronaut traveling in and out of the Hab almost daily. Airlock 1 was closest to the rover charging station, so the astronaut preferred it to the other two.}\]
*When pressurized, the airlock expanded slightly; when depressurized, it shrunk. Every time the astronaut used the airlock, the strain on AL102 relaxed, then tightened anew.*

*Pulling, stressing, weakening, stretching... (154-155)*

In these sequences, denoted by the text switching to an italicized font, the novel switches from Watney’s logs to interstitial vignettes featuring an omniscient, impersonal narrator. The Hab is resilient, but overuse and abuse eventually take their toll. By pushing the Hab to and beyond its limits, including Watney’s hundreds of extra trips transporting dirt, Airlock 1 and the Hab eventually fail. The breach and decompression of the Hab immediately ends Watney’s farming experiment: “Potatoes are now extinct on Mars. So is the soil bacteria. I’ll never grow another plant so long as I’m here” (171). Farming in the Hab, like agrilogistics on Earth, sows the seeds of collapse.

Even before the Hab’s breach, Watney’s Martian soil is useless on its own. Even with the addition of bacteria from Earth soil and human waste, Watney still needs hundreds of liters of water to make his potato farm viable. Watney burns hydrazine rocket fuel in the presence of oxygen to chemically synthesize water. This method has its drawbacks, however, as burning fuel in the Hab has the same consequences as burning fuel on Earth—the byproducts have nowhere else to go. In the same way that the Hab is a “closed system” (151), Morton explains that Earth is as well:
A baby vomits curdled milk [...] The parent scoops up the mucky milk in a tissue and flushes the wadded package down the toilet. Now we know where it goes. For some time we may have thought that the U-bend in the toilet was a convenient curvature of ontological space that took whatever we flush down it into a totally different dimension called Away, leaving things clean over here. Now we know better: instead of the mythical land Away, we know the waste goes to the Pacific Ocean or the wastewater treatment facility. Knowledge of the hyperobject Earth, and the hyperobject biosphere, presents us with viscous surfaces from which nothing can be forcibly peeled. There is no Away on this surface, no here and no there. In effect, the entire Earth is a wadded tissue of vomited milk. (*Hyperobjects* 31)  

By reading the Hab as a microcosm for Earth, through Jameson’s world-reduction, Weir’s text can be used to see the hyperobject Earth more clearly. The “no away” of the Hab is clear—Watney needs technologies and machines like water recyclers, oxygenators, and reseeding his own potatoes to keep his miniaturized ecosystem functioning. Watney can of course dump things outside the Hab, but the brutal Martian environment immediately freezes and sterilizes them, meaning once gone they are truly gone. Everything is contained within a very small circle of life. Likewise, Earth is in many ways the Hab writ large—taking the place of Watney’s

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21 Morton’s use of the “wadded tissue of vomited milk” is evocative because it is unappealing, but at the same time it is not an especially useful example. Both the tissue and milk are at least biodegradable. Perhaps the plastic wrapping that encased the cardboard packaging of the wadded tissue would serve the purpose better.
water recycler is soil and the water cycle, and the byproducts of naturally occurring photosynthesis replace the oxygenator. Of course, just as Mars could be considered the Hab’s “away,” so too could space be Earth’s “away,” but even then these items and objects are not truly gone. And blasting waste into outer space would create a far larger problem than it could ever possibly solve. For the most part, then, both the Hab and Earth are closed loops, but on vastly different scales. Watney’s byproducts are trapped in the Hab: “Chemistry is messy, so there’s unburned hydrogen in the air […] Waiting for a spark so it can blow the Hab up!” (36). Watney’s transformation of the Hab nearly causes its destruction. The build-up of gases in the Hab, like the accumulation of greenhouse gases in Earth’s atmosphere, leads to ecological peril.

To grow as many healthy plants as quickly as possible, regardless of the long-term consequences, Watney alters the Hab’s environment extensively, by increasing its humidity and temperature. In order to give the potatoes ideal growing conditions and “make the plants grow faster,” Watney raises the temperature in the Hab “to a balmy 25.5°C” (Weir 21). While growing his potatoes, Watney unceremoniously tinkers with the very Hab equipment keeping him alive: “During this process, the poor Hab had to be the mother of a messy toddler” (34). Here, the novel openly genders the Hab while leaving the “toddler” Watney unsexed—this is intriguing, for it not only connects the Hab with the notion of “Mother Earth,” it also reinforces some of the traditional gender roles that would seem to go hand-in-hand with some

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22 Just such a scenario is considered in the sf retrofuturism animated series *Futurama* in the 1999 episode “A Big Piece of Garbage.”
of *The Martian*’s other outdated modes and open nostalgia for prior eras, especially the 1970s (and discussed more in the following section). The novel depicts Watney's misuses and abuses of the Hab as ingenious—"If I’ve learned one thing from my stay at Club Mars, it’s that everything can be useful" (238)—but an ecocritical consideration reveals the problematic relationship between Watney as the “toddler” humanity and the Hab as a suffering and overworked “mother” Earth. Everything Watney produces is Morton’s wadded tissue, although on Mars nothing is biodegradable, not even Watney’s body: “He’s not going to decompose. He’ll be there forever” (Weir 52). Whereas nature must deal with humanity’s waste on Earth, the technological systems of the Hab must take care of Watney’s. And both are deteriorating.

After manufacturing water, Watney states: “Boy this place is like a tropical jungle now, I’ll tell ya. It’s almost 30°C in here, and humid as hell” (34). Watney’s simile referencing the tropical jungles is one of the novel’s few mentions of nature on Earth. Another reference to those extensively deforested and exploited jungles appears with a much (unintentionally) darker reference to NASA administrator Teddy Sanders’s “mahogany desk” (55), a luxury wood obtained from over-exploited tropical rainforests. Desks, computers, and coffee rather than trees, animals, and rivers symbolize the Earth of *The Martian*. This divergence is further reflected in the different depictions of Watney and Sanders, working to establish the scale model Earth of the Hab as more natural than Earth itself. Watney connects himself with the soil by referring to himself as “Farmer Mark” (22) and notes: “I wish I had a straw hat and some suspenders” (149). Sanders, on the other hand, is
systematic and mechanical: “He terminated the call and put his phone on the corner of his desk, flush with the desktop’s edges” (130); “He squared a small stack of notes he’d prepared and placed them neatly in front of him” (176). These descriptions of characters, along with Watney’s transformation of the Hab, establish it as more “natural,” and therefore more Earth-like, than the actual Earth depicted in the novel.

Nostalgia for a (Misremembered?) Decade

As noted earlier, The Martian offers a variety of themes that reinforce traditional worldviews, be it the Space Race aspects of the novel, those that reinforce traditional gender roles, or those that consider environmental concerns as an aside or afterthought rather than a prevailing interest. One of The Martian’s narrative conceits, in both its fictive and filmic forms, is an overt 1970s nostalgia. Interestingly, 1979 witnessed the publication of one of the foundational texts on nostalgia as a phenomenon, Fred Davis’s Yearning for Yesterday. Davis established that university students associated words “such as warm, old times, childhood, and yearning with the term ‘nostalgia’ much more frequently than they did with homesickness,” the original concept with which nostalgia is linguistically connected (4). Weir’s nostalgic turn is directly tied to The Martian’s failure to imagine a fully-realized sf future—the novel and film instead offer a nostalgia for the past rather than a hopefulness for the future. In this way, The Martian represents an old-
fashioned mode of progress superficially reimagined for the twenty-first century. Throughout the novel, Weir offers a nostalgic reverie for the 1970s that pervades the text in both subtle and overt ways. Rather than imagining future popular culture, for example, Watney listens to disco and watches *Three’s Company* and *Happy Days*. By presenting the 1970s as an idyllic past of simpler times,*The Martian* “reflects dominant cultural anxieties of the time [2011] when the greatest threat to the American way of life is not a Soviet nuclear armament or the spread of communism, but a global ecological disaster” (Smith 330). However, despite the novel’s nostalgia for the 1970s, the text seems focused on misremembering only certain aspects of that era—avoiding the uncomfortable fact that at the time the Cold War was not a simple affair—and totally ignoring the fledgling environmental movement that was quickly growing at the same time.

Unlike many sf texts that imagine a new and compelling future, *The Martian* instead offers a hodgepodge of reworked 1970s paradigms, such as the Ares Program. Watney and his fellow astronauts travel to Mars on Ares 3, the third mission of NASA’s eponymous Ares Program, one that recalls an earlier era of spaceflight. Far from being either science fictional or aspirational, the Ares missions are simply a larger scale recreation of the Apollo Program of the 1960s and 1970s. Even the name of the Ares Program reflects a continuation of prior NASA programs—like Mercury, Gemini, and Apollo before it; Ares is named after a Greco-Roman deity. Like the Apollo landings of 1969–1972, the Ares missions are the work of a single national space agency—NASA—rather than some larger international project. Weir’s Ares Program grew even more anachronistic as the 2010s wore on.
and eventually concluded, and as private commercial ventures like Elon Musk’s SpaceX or Jeff Bezos’s Blue Origin began to supplant traditional governmental space programs. Taken together with the story’s competition (and brief détente) between the United States and China, the novel re-envisions the bipolar world of the Cold War era by merely substituting a new (communist) foreign power for the erstwhile Soviet Union. Perhaps not coincidentally, *The Martian* (and Mars fiction generally) is also informed by a major turn tied to the American-Soviet space race: Mariner 9. In 1971, the American space probe arrived in Mars orbit, and after mapping 85% of the Martian surface, “the possibility of Mars as an analogue of Earth was conclusively put to rest” (Smith 335). Weir’s Mars builds off this juncture point in Martian science—thanks to the Cold War—to offer a scientifically accurate portrayal of the Red Planet.

*The Martian* also largely follows the racial and gender dynamics of an earlier era—although the *dramatis personae* of the novel and cast of the film represent a more varied racial and sexual cross-section of the world than the astronauts of the Apollo Program, they are still far more backward- than forward-looking. Of the twenty-four Apollo astronauts who orbited or landed on the moon, all were heterosexual, white, American males (Messier). The crew of Ares 3 is decidedly more diverse: there are two female crewmembers, Commander Melissa Lewis and Beth Johanssen; one Latino, pilot Rick Martinez; and three white males, Chris Beck, Alex Vogel, and Mark Watney. All of the crewmembers save Vogel (a German national) are Americans. NASA and JPL also boast fairly diverse populations. However, it is still white, American males that hold the levers of power (apart from
Commander Lewis). Teddy Sanders is the head of NASA. Mark Watney is the novel’s protagonist. Although Watney is not specifically coded as white, “Weir gives his reader every reason to assume that like the literary yeoman of the past (and unlike many actual homesteaders), Watney is of white European extraction” (Smith 333). Weir, in an interview surrounding casting choices for Scott’s film adaptation, says “when I write, I just see a sort of blob of protagonist [...] unless it’s like really important to the plot I don’t physically describe my characters at all” (Wickman).24 Of course, given the propensity of “straight white (generally American) male” to serve as the default setting in much contemporary literature and cinema, Weir’s claims that he intended no physical traits for Watney seems rather disingenuous.

The novel’s privileging of the heterosexual, white, able-bodied, American male carries into the film as well. In the film version, Sanders (Jeff Daniels) concludes a telephone call with the U.S. president with, “Thank you, Mr. President” (The Martian 56:26). Whereas other sf narratives might make the subtle but conscious choice to include a “Madam President,” The Martian fails to do so. The film was also widely disparaged for changing the race of two characters coded as Asian-American in the novel—Venkat Kapoor and Mindy Park—by casting them with Black and white actors, respectively.25 Despite a seemingly superficial inclusion of diversity, the most important characters look like author Andy Weir and the same

24 In an obvious attempt to respond to criticism on this front, Weir clumsily made the protagonist of his second novel, Artemis (2017), a young woman of Arab descent, leading to “forced and awkward” racial depictions (Namaste and Scoles). Perhaps because of this he reverted to featuring a white, male American protagonist in his third novel, Project Hail Mary (2021).
25 British actor Chiwetel Ejiofer was cast as the Indian-American character Venkat Kapoor, and renamed Vincent Kapoor, although his character alludes to being of mixed African and Indian heritage in the film. White Canadian actress Mackenzie Davis was cast as Mindy Park, a character coded as Korean-American in the novel (Donnelly).
Apollo astronauts who traveled to the moon six decades before the events of *The Martian*—white, heterosexual, American males. Smith notes, "Just as narratives of the frontier tend to focus on the white settler experience, the reinvention of the American frontier in *The Martian* imagines the practice of resettlement as a primarily white affair" (334). Not only does this paradigm reenact the racial dynamics of the Space Race era, it also contributes to an assessment of *The Martian* as a Robinsonade or American yeoman narrative, wherein the protagonists—such as Robinson Crusoe or Jonas Grumby or, presently, Mark Watney—are invariably white males.

In much the same way that the novel fails to adequately update the stagnant racial and gender throwbacks of prior decades, so too does it channel earlier cultural norms and social constructs. Rather than extrapolate any potential future culture, as is the case in so many sf novels and films and other media, *The Martian* in both fiction and film relies on holdovers from the 1970s. Part of Watney's problem in the novel is loneliness and tedium—other than his struggle for survival and near-constant repair and maintenance work, he has nothing to do to entertain himself or relax save the material available to him on Commander Lewis's abandoned laptop. Lewis is obsessed with Western (predominantly American) culture of the 1970s, especially television shows and music. Watney's need and desperation prompts him to consume Lewis’s entire collection over the duration of his time on Mars, and although he complains about it bitterly, the novel presents it to readers (and the film to viewers) as amused nostalgia rather than true contempt. "For tonight, I have to get back to *Three's Company,*" Watney confesses, "I stopped last night in the middle
of the episode where Mr. Roper saw something and took it out of context” (Weir 23).

Watney's statement, which appears to be something of an in-joke for readers familiar with *Three's Company*, which aired from 1977–1984, seems out of place for a novel set in 2035. Watney also poses for a photograph for NASA by channeling “the Fonz” (Henry Winkler) from *Happy Days* (1974–1984), noting: “Blame it on seventies TV” (Weir 125). It is also worth pointing out that *The Martian’s* callbacks—Mr. Roper, “the Fonz,” Tony Stark (Iron Man)—are predominantly white and male. Watney directly references the classic sf film *Alien* (1979), logging: “In space, no one can hear you scream like a little girl” (367). Here, Watney combines a modified allusion to *Alien’s* famous tagline with a dose of misogyny and sexism. Also missing are cultural (nonwhite) milestones like *Sweet Sweetback's Baadasssss Song* (1971) or *Fat Albert and the Cosby Kids* (1972–1985). Weir’s memory of the 1970s seems to be a monolithically white affair. Interestingly, just as *Happy Days* itself was built on nostalgia for the 1950s, so too is the larger framing nostalgia of *The Martian* a part of the wider wistful epidemic of the 2010s of what Malgorzata J. Rymsza-Pawlowska calls “nostalgia culture” (82).26 The novel’s nostalgic attitude likely reveals Weir's own nostalgia or desiderium for his formative years, but this focus on a misremembered, supposedly simpler and more idyllic time nevertheless fits well with *The Martian’s* other failures to imagine an sf future or consider contemporary concerns.

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26 Numerous works—sf and otherwise—of the early twenty-first century reveal this boom of “nostalgia culture” in practice, particularly for the 1980s and 1990s. Ernest Cline’s *Ready Player One* (2011), the Netflix series *Stranger Things* (2016–2024), and the various *Star Trek* revivals of the late 2010s and early 2020s are but a few examples.
Like Weir’s novel, Scott’s film adaptation remains true to its source material’s nostalgic turn. In fact, while the 1970s cultural references only appear from time to time throughout Weir’s text, Scott imbues the entire movie with them through both diegetic and non-diegetic music hits from that decade throughout the film’s score, while also making direct visual allusions to older sf classics like *2001: A Space Odyssey* (1968), Scott’s own prior film *Alien* (1979), and the video games *Zork II* (1981) and *Leather Goddesses of Phobos* (1986). Watney still watches *Happy Days*, poses as “the Fonz,” and complains about Commander Lewis’s disco collection in the film, but the movie itself wistfully plays hit 1970s songs at key moments throughout the narrative. In addition to the film’s underscore (which recalls the agrarianism and pastoralism of the frontier through the use of the fiddle and other folk instruments), Scott uses eight 1970s hits to highlight aspects of the narrative while also offering a humorous longing for the music of a bygone era that so inspires many aspects of the film. For example, when Watney digs up the radioactive RTG (radioisotope thermoelectric generator) to use as a heat source, he diegetically plays Donna Summer’s 1979 hit “Hot Stuff” for his video diary (*The Martian* 38:25). Later, when the crew of Ares 3 resupplies during an Earth flyby on their way to return to Mars for Watney, David Bowie’s 1972 “Starman” booms exuberantly (*The Martian* 1:33:15). Finally, during the dénouement and end-credits, Gloria Gaynor’s 1978 hit “I Will Survive” closes out the film (*The Martian* 2:16:06). Although often offered non-diegetically, the viewer can assume that the songs are part of Lewis’s library, and therefore that they are also part of Watney’s listening repertoire. In this way,
the film’s music is both self-referential and nostalgic, and reinforces the film’s longing for the 1970s and preoccupation with that past decade.

Despite both the novel’s and film’s overt nostalgia for the culture of the 1970s, one important part of that decade missing from both text and celluloid is any reference or awareness of the burgeoning environmental movement of the era. The 1970s may have been the decade of the Fonz and disco, but it was likewise the decade of the creation of Earth Day (the first was celebrated on March 21, 1970), the formation of the Environmental Protection Agency in the United States (formed in December 1970), the release of environmental science fiction films like *Godzilla vs. the Smog Monster* (1971) and *Soylent Green* (1973), and the publication of seminal environmental speculative fiction novels like Ernest Callenbach’s *Ecotopia* (1975) and Marge Piercy’s *Woman on the Edge of Time* (1976). The last year of the decade also marked the publication of James Lovelock’s foundational ecophilosophical text *Gaia: A New Look at Life on Earth* (1979). Despite his obvious longing for the lost world of the 1970s, and recreation of an imagined future that both pays homage to and mirrors it, Weir misses the opportunity to include the decade’s nascent environmentalism as part of his text, instead opting for the more conservative (and often problematic and outdated) social, cultural, and political facets of the era. In fact, despite its direct and indirect allusions to *Alien*, Weir seems to miss some of the film’s key forward-looking aspects—it is *Alien*, after all, that stars one of the sf genre’s earliest and most-renowned female heroes, Ellen Ripley (Sigourney

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Weaver), while also warning against an over-reliance on technology, runaway corporatism, and the potential pitfalls of genetic engineering and environmental degradation in its dystopian, cyberpunk storyworld.

**Environmental Transformation from Fiction to Film**

Ridley Scott’s film adaptation of *The Martian* builds on some of the novel’s motifs (such as its overt embrace of 1970s music and popular culture) and largely tracks the plotting of Weir’s original source material; but Scott, paradoxically, both magnifies the novel’s 1970s nostalgia while at the same time adding a new environmental undercurrent lacking in Weir’s text that makes the film more relevant to the moment of its production. Some of these changes are a result of the differences between media, but others appear more intentional and relevant to an ecocritical assessment of the story. Although Weir’s novel lacks any environmental preoccupations that one would otherwise expect in the sf genre of the 2010s, Scott’s iteration of Watney’s survival epic does contain hints of a subtle environmental agenda. The divergence between the two are likely the result of differing views held by Weir and Scott, respectively, but also by the passage of time—while Weir wrote much of *The Martian* in 2009, early in the burgeoning awareness of global warming and other environmental crises of the long 2010s, Scott’s film premiered six years later, in 2015. The movie’s environmental concerns do not appear overtly in its narrative but remain buried in the subtext and Scott’s deliberate camera shots and filming techniques. To illustrate this point, I offer a close reading of three images
from the film that highlight its subtextual environmentalism, a theme totally lacking in, perhaps even anathema to, its literary counterpart.

The first compelling environmental image appears early in Scott’s film, during Watney’s potato-growing endeavors. Although Scott’s Watney grows potato plants for sustenance in much the same way as Weir’s Watney, there are noticeable differences. Scott de-emphasizes some of the farming minutiae focused on by Weir (likely due to concerns over the audience’s attention span), as well as cutting some of Watney’s more problematic dialogue that emphasizes his focus on unsustainable agricultural techniques and only the immediate future. It is true that both iterations of Watney do not plan to remain on Mars long-term, but Scott’s Watney appears slightly more circumspect about the environmental impacts of his actions. This comes into focus when Watney’s first potato plant sprouts. Walking by his Hab greenhouse, Watney peers through a slit of plastic and then does a double-take—he sees something different, something very un-Martian, something decidedly and vividly verdant. Watney gingerly enters his greenhouse as composer Harry Gregson-Williams’s calming, ambient cue “Sprouting Potatoes” enters the sound mix. (See Figure 2, page 76). The scene, complete with melodic music, appears intentionally Edenic. Scott is no stranger to incorporating religious themes and imagery in his films—from historic epics like *Gladiator* (2000) and *Kingdom of Heaven* (2005) to sf productions like *Prometheus* (2012) and *Raised by Wolves* (2020), Scott includes religious and spiritual dimensions throughout his oeuvre. Watney approaches the sprout, reaches down, and gingerly touches the plant while dew hangs from the leaves. The color contrast reinforces the importance of non-human life—especially
vegetation—to human survival. The *mise-en-scène* of the shot puts the viewer in Watney’s shoes, and a close-up of Watney’s disembodied hand could just as well be the viewer’s own (if the viewer is a white male, at least). The image also visually recalls Michelangelo’s *The Creation of Adam*, again hinting to Scott’s intentional religiosity and Edenic themes. The lack of any similar sequence in the novel emphasizes its importance and difference in Scott’s film. In the novel, Watney’s farming is mundane and repetitive, while the film instead focuses on important moments like the potato’s first sprouting.

Following a hard-cut, Scott’s environmental point-of-view carries over into the film’s next scene. After nearly thirty minutes of film-time spent with Watney on Mars, an establishing shot of Earth introduces the movie’s other major characters. Interestingly, the first shot of Earth and opening scenes on the planet are again totally lacking from Weir’s text. A shot of Earth from orbit cuts to Teddy Sanders eulogizing Watney during a memorial service at a cemetery. Unlike Weir’s novel, the Earth-based scene is outdoors, not in the claustrophobic and anonymous hallways and offices of NASA. As Sanders praises Watney, the camera lingers on the green grass and autumn foliage of the cemetery. Even at such a solemn occasion, the beauty and vivid contrasting colors of nature fill the image. Unlike the atopian non-places that totally populate the storyworld of Weir’s text, Scott’s film introduces the planet and its human characters with a decidedly natural shot and setting.²⁸

Furthermore, by establishing Earth and human characters with a graveyard scene,

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²⁸ Interestingly, while cemeteries and graveyards are not atopian places, they are another unique type of space—a heterotopia. This concept will be examined in Chapter 4.
Scott highlights the fragility and ephemerality of life. Although the story still largely takes place on Mars and in anonymous bureaucratic offices, Earth appears far more present in the movie version. Characters appear outside, and even when they do not, the outside world is often visible through the windows of NASA and JPL. This disparity reinforces the differences in environmental outlook between Weir’s book and Scott’s film, revealing the layers of environmentalism present in *The Martian* movie so lacking in the novel.

Not only does Scott’s introduction of Earth feature natural imagery, it also recalls one of the missing aspects of *The Martian*’s 1970s nostalgia: the fledgling environmental movement. As noted above, the film cuts to an establishing shot of Earth immediately after the potato sprout sequence. The shot begins with a hard-cut to outer space, as the view pans down to reveal Earth from orbit. As the view pans downward, the effect for the viewer is that of the planet rising. (See Figure 3, page 76). In this way, Scott visually recreates one of the most famous images of the environmental movement, astronaut William Anders’s 1968 photograph *Earthrise*. (See Figure 4, page 77). *Earthrise* was photographed by Apollo 8 commander Anders during the mission’s lunar orbit on December 24, 1968. Ian Sample, writing for *The Guardian*, notes: “A driving force of the environmental movement, the picture, which became known as *Earthrise*, showed the world as a singular, fragile oasis” (Sample). Likewise, celebrated nature photographer Galen Rowell called the image “the most influential environmental photograph ever taken” (Filmer). In the same way that the barrenness of the moon struck Anders and the other Apollo astronauts when contrasted with the blue and green brilliance of their home planet, so too does
Scott’s *The Martian* juxtapose the desolate red wastes of Mars with the verdant green nature of Earth.

Finally, the literary and filic versions of *The Martian* feature different conclusions. In the novel, Watney is rescued by the crew of Ares 3 and he muses on his salvation as they begin their long journey back to Earth. Although they presumably return safely, the outcome of their trek is at least unclear. The movie, on the other hand, offers postscripts for the film’s major and minor characters. Watney’s story remains paramount, as the film transitions to a shot of Watney sitting on a park bench at the U.S. Air Force Academy. Time has clearly passed, and the malnourished and disheveled Watney rescued by Ares 3 has returned to human society, complete with a fresh haircut and eyeglasses. Unlike in the novel, where Watney remains a static character, the film’s Watney now possesses a new appreciation for his home planet. As he sits on the bench surrounded by trees and shrubs, Watney bends down to touch a sprouting weed as he did with his potato plants on Mars. (See Figure 5, page 77). The mise-en-scène of this shot recreates the shot of the potato seedling from the beginning of Watney’s Martian ordeal. Again, as before, the close-up of the disembodied hand could make it the viewer’s as well as Watney’s. However, even if Scott’s imagery subverts the lack of environmental messaging in Weir’s text, it still unconsciously echoes it in other ways. By having Watney, a straight, white, American male, serve as the stand-in everyman, even if for a laudable environmental message, the novel’s focus on outdated gender and racial dynamics simply becomes supported through other means. As Smith argues:
The continuing adherence of Mars fiction to the mythology of the yeoman, I contend, serves to reaffirm a mythic version of American history that marginalizes people of color, legitimizes a white male hegemony, and glorifies American interventionism while diverting us from the ecological and human victims that such practices produce. (322)

Smith compares the yeoman farmer myth of *The Martian* with other Mars settlement narratives, finding Weir’s novel and Scott’s adaptation problematic. Watney’s experience is “a version of the American west free of the complications of [persons of color] settlers and First Nations people,” where the text can “sublimate present anxieties—the projections of eco-disaster over coming decades are replaced by the promise of scientific ingenuity, humanity’s inherent goodness, and faith in the mythic (white, male) American spirit” (339). Although Scott’s rendition of the narrative complicates the novel’s (lack of) environmental message, the focus on Watney’s ingenuity, resourcefulness, and boundless ability and talent nevertheless remain.

**Leaving Mars Behind**

Although Weir’s novel ends on the uplifting note of Watney’s eventual rescue by the returning crew of Ares 3, its environmental implications paint a darker portrait. Weir’s novel does address climate change directly—but on Mars not on Earth. When traversing the Martian landscape Watney explains the choice of
location for the Ares 3 mission: “Our landing site is at the delta of a long-gone river. NASA chose it because if there are any microscopic fossils to be had, it’s a good place to look” (97). The science behind Watney’s statement is sound, as the Martian “atmosphere used to be thick enough for water to run on the surface” (Sharp).

Although the novel’s discussion of climate change is circumspect, a comparison of the novel’s primary settings on Earth, NASA and JPL, with those of Mars reveal a shared sterility and lifelessness. Taken together, this understanding hints at the potential consequences of humanity’s exploitive interactions with Earth, and this new interpretation reveals some possible consequences with references to Mars’s own lifeless environment as a potential future-Earth if humankind does not alter its environmentally destructive ways. Just as Watney’s activities in the miniature-Earth mesocosm of the Hab lead to its degradation and eventual collapse, so too can human actions on the real Earth cause its own environmental catastrophe in the form of climate change.

Watney’s single-minded pursuit of his own survival, without regard for costs, is understandable and extremely human, but at the same time this impulse has been played out on Earth by billions of humans over thousands of years and has led to ecological degradation and existential environmental crises. Like humans on Earth who often justify environmental destruction and pollution in the name of economics, practicality, or political considerations, Watney believes his own well-being trumps all other considerations. Rescuing Watney requires a sustained global effort; it is difficult, it is costly, and it will not necessarily be successful. However, the world pulls together to save the castaway astronaut and succeeds. Recovering
Watney requires the sort of global commitment that the world has so far not been willing to make to combat climate change. Perhaps the sort of broad, unyielding coalition that was developed to save Watney can also ward off global warming, but time is dwindling. No matter how ingenious or resourceful Watney is, his time and resources eventually run out. No matter how much money NASA is willing to pour into rescuing their wayward astronaut, they barely succeed, and without any time to spare. Watney and NASA cannot technofix their way out of every possible situation.

The Martian recounts the problematic history of human-environment interaction in the microcosm of Watney’s experience stranded on Mars. Watney grows potatoes in the Hab, reenacting the history of agriculture, “the worst mistake in the history of the human race” (Diamond). Watney alters the Hab’s environment and climate to survive, recreating anthropogenic climate change. Finally, both Watney and NASA reveal humankind’s tendency to embrace short-term gain over long-term pain, as they misuse, appropriate, and plunder whatever resources and technological fixes they need to ensure Watney’s survival and rescue, without regard for costs of any type. Despite utilizing the combined resources of three separate Ares missions and other resources, Watney’s time on Mars is short, and eventually runs out. He must leave the deteriorating Hab behind and flee the planet. SF narratives often deal with immensities of scale—interstellar spaceflight, time travel, new worlds, and alien species—that impress with the sublime. An analysis of The Martian, however, flips the script, by taking the hyperobjects of agrilogistics, climate change, and environmental exploitation from their massive size to a more understandable (and therefore less deniable) scale. An ecocritical reading of The
*Martian* indicates that no matter what potential future fixes humanity may devise to deal with the repercussions of climate change, technology and resourcefulness can only take us so far. Like Watney, humans are incredibly adaptable and resilient, but he and we cannot fix everything, including our troubled planet. Only a sustained global initiative like the one that saved the Watney could possibly be successful, and so far the nations of Earth have not been nearly so willing as their fictional counterparts to make that commitment. In fact, even if climate change is regarded as too abstract a concept for such global cooperation, the Covid-19 pandemic—and resistance to even simple measures like masking and social distancing—has likely shown that not only is unanimous global cooperation illusory, in the early twenty-first century even localities and nation-states are mostly unable to achieve consensus. *The Martian*, paradoxically, offers feel-good truisms and naïve optimism in the face of overwhelming human and environmental challenges. Weir’s text offers several compelling and contradictory messages, few of which are intentional and none of which are obvious on its surface, but which nevertheless seem quite apropos to its historical moment.

In conclusion, then, *The Martian* appears as an interesting anomaly among sf texts of the long 2010s. Over a period when sf novels, films, and other productions appear preoccupied with global warming, other environmental calamities, and social change tied to race, sex, and gender, *The Martian* stands apart. On the other hand, Weir’s novel also fits in perfectly with the thread of Mars-inspired cosmic escapism also running through the prior decade. Ergo, in many ways, Weir’s text proves both enigmatic and contradictory. While the widespread interest in Mars
over the course of the 2010s was largely tied to environmental decline and climate change on Earth—in other words, looking for a “Planet B”—Weir’s novel develops this notion into the Ares Program and Watney’s ordeal without in any way considering or examining its underlying causes. Along the same vein as the text’s silence on environmental issues runs its atopian non-places, both on Earth and Mars alike. Weir publicly admits that the least realistic part of his novel is the one also tied directly to its supposed setting, Mars. The sandstorm that maroons Watney is impossible on Mars: the atmosphere there is simply incapable of hosting a storm that could damage NASA’s Ares Program. This reveals that Mars itself is no more important to the story than the other atopian locales—it could really be told anywhere. Whereas the desert world of Weir’s Mars serves as a useful location for atopian musings, it is the similarly inhospitable extrapolated dystopian spaces of other films of the 2010s that instead imagine the ravages of climate change on Earth.
Figure 2

(The Martian 28:45)

Figure 3

(The Martian 29:00)
Figure 4

(NASA)

Figure 5

(The Martian 2:11:35)
Chapter 2

Dystopian Paradoxes: Beautiful Nature, Dark Visions, and Imagined Landscapes in Contemporary SF Cinema

In this chapter, I examine two widely watched, mainstream environmental sf films, both of which have been understood to be responses to the current climate crisis, Avatar (2009) and Interstellar (2014). Both films include imaginary planets and human attempts to subjugate or settle them for more room and new resources, as well as a troubling recasting of contemporary social issues with imperialist implications, often tied directly to place and environment. Due to these recurring elements, I connect the environmental themes and human social issues raised in these films through this project’s recurring lenses of genre theory—their place (and their places) within science fiction—and ecocriticism, especially the subfield of ecofeminism. I begin with the concept of dystopia and how this type of fictional place manifests in different, often unexpected, and many times ironic or paradoxical ways. I then examine these two popular sf dystopian films as case studies, subjecting their narratives to a close reading and critique, including an in-depth examination of their use of imagery and visuals. Avatar and Interstellar both conceal hidden messages, presenting several layers of paradox in their commentary on humankind’s trajectory in their extrapolated storyworlds. These deeper themes include not only a direct critique of escaping the troubles of Earth for outer space, but fleeing reality for a virtual alternative as well, as well as the importance of protecting our Blue Planet now to avoid the dark fates of their imagined futures.
Together *Avatar* and *Interstellar* represent a cross-section of popular outer space-based sf dystopias of the 2010s, which, when viewed through the lenses of genre and ecofeminism, reveal a range of shared environmental and social themes and commonalities, but also unique and compelling differences. For example, both portray their imagined future Earths as dystopian (although *Avatar*'s is hyperindustrial and *Interstellar*'s is agrarian), both rely on traditionally masculine white male American heroes, and both seek salvation on imagined exoplanets from the woes of Earth. However, both pictures also feature intriguing countercurrents that paradoxically push back against their surface-level themes, through their differing portrayals of Earth, the evolution of their characters, and the cinematic techniques used to display their imagined worlds—the fully realized CGI world of Pandora in *Avatar* versus the more traditional use of exotic locales in *Interstellar*'s worlds. *Avatar* and *Interstellar* play with dystopian, utopian, and anti-utopian motifs through their narratives and extrapolated depictions of Earth's and humankind's future, as well as beautiful-yet-deadly imagined planets and worlds. In doing so, they hint at a conservationist message: not only is twenty-first century humanity turning Earth into a dystopia (an environmental one, but also a more traditional sociopolitical one), but the other possible (theoretical and imagined) worlds

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29 There are, of course, numerous other examples of dystopian narratives from the prior decade. Suzanne Collins's *The Hunger Games* (2008–2010) and Veronica Roth's *Divergent* (2011–2013) trilogies are but two prominent Young Adult (YA) examples, adapted into two blockbuster film series that premiered from 2012–2015 and 2014–2016, respectively. Ernest Cline's *Ready Player One* (2011), adapted into a 2018 film of the same name, imagines the escape from a ruined Earth to an equally combative virtual reality. *Dredd* (2012) is a remake of *Judge Dredd* (1995) based on the earlier comic of the same name. NBC Peacock's recent series *Brave New World* (2020) is an updated iteration of Huxley's classic novel. *Zombieland* (2009) and its sequel *Zombieland 2: Double Tap* (2019) combine the dystopian, zombie, and comedy genres. For this project, I focus on original film dystopias rather than those adapted from literary sources.
available will never be perfect for human life, even if they are alluring in other ways.

Although these films offer warnings of humankind’s bleak future through their
dystopian visions, they fail to offer a clear vision for a compelling alternative; Avatar
and Interstellar respond to the failings of other sf spectacles like Weir’s The Martian,
but they nevertheless do not fully imagine a better path forward like those
encountered in later chapters in James S.A. Corey’s The Expanse. This leaves both
films in a limbo of sorts, where they acknowledge some of humankind's
contemporary ills but fail to offer any prescription for a better alternative.

Dystopian fiction goes hand-in-hand with the sf genre, for it has long fallen
on speculative fictions to imagine dystopias through the twin modes of
extrapolation and allegory. The term “dystopia” itself dates to English philosopher
John Stuart Mill, who coined the word in an 1868 address to Parliament on the
British government’s Irish land policy (Roth 230). Mill, borrowing from the Greek
word-origins of “utopia” and “eutopia” (for “no place” or “good place,” respectively,
and discussed more in Chapter 3), posited his dystopia as a “bad place,” and
therefore the opposite and antonym of the utopian dream. In his magnum opus on sf
utopias, Archaeologies of the Future, Jameson declares: “The critical dystopia is a
negative cousin of the Utopia proper, for it is in the light of some positive conception
of human social possibilities that its effects are generated and from Utopian ideals
its politically enabling stance derives […] whose affiliations are feminist and
ecological as much as they are Left-political” (198–199).\footnote{Jameson demarcates a line between not only between dystopias and utopias, but also between these forms and anti-utopias and apocalyptic narratives.} The dystopian warnings
of the sf genre date back to some of the most canonical works of the twentieth century concerned mainly with societal (and often moral) collapse and the rise of authoritarian and despotic governments: Aldous Huxley's *Brave New World* (1932), George Orwell's *Nineteen Eighty-Four* (1949), Ray Bradbury's *Fahrenheit 451* (1953), and Anthony Burgess's *A Clockwork Orange* (1962).

Given the intertwined nature of environmental and societal concerns in the recent dystopian films covered in this chapter, it makes the most sense to examine them through a critical lens that unifies its analysis of the human and the environmental: ecofeminism. Some of the first seeds of ecofeminism as a field of study were sown in 1984 with the publication of Leonie Caldecott and Stephanie Leland's edited volume *Reclaim the Earth: Women Speak Out for Life on Earth*. According to Greta Gaard in *Critical Ecofeminism*, this foundational text “named the gender/race/species/ecology/nation connections operating in hierarchical dualist thought and the logic of domination, as well as the spiritual, psychological, political, philosophical, historical, economic, and activist ecofeminist standpoints from which ecofeminism developed” (xiv). Unlike ecocriticism, which was defined in its

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31 This spore of ecofeminist thought germinated in the late 1980s and 1990s, eventually blossoming into ecofeminism as a varied and developing critical theory with a range of subfields. This second-stage of ecofeminist texts included such monographs and anthologies as Judith Plant's *Healing the Wounds: The Promise of Ecofeminism* (1989), Irene Diamond and Gloria Feman Orenstein's *Reweaving the World: The Emergence of Ecofeminism* (1990), and Gaard’s earlier work, *Ecofeminism: Women, Animals, Nature* (1993), among numerous others. This wave also featured ecofeminism’s cross-pollination with other related subjects, from feminist democracy and citizenship to green politics to reproductive health and biodiversity and veganism, showcasing both the interdisciplinary nature but also the inherent flexibility of the theoretical framework. By the late 1990s into the first decade of the twenty-first century, critics such as Richard Watts argue that ecofeminism reached its third wave, wherein a theoretical field “either sustains and integrates the critiques leveled at it and evolves, or does not and ossifies, opening itself up to the charge of nostalgia” (252). The third-wave ecofeminism that flowered in the twenty-first century includes such works as Val Plumwood’s *Environmental Culture* (2002) and a wide range of other diverse texts that “address intersections of race, nation, gender, and species” (Gaard, *Critical Ecofeminism* xvi). These varied works include: A. Breeze
foundational text *The Ecocriticism Reader* by Cheryll Glotfelty as “the study of the relationship between literature and the physical environment” (xviii), ecofeminism lacks any such originating definition. Ecofeminism, by contrast, developed more organically and through various wellsprings, drawing on ecocriticism, feminism, postcolonialism, animal studies, social justice, Marxism, and other fields, as well as both related yet distinct academic and activist strains.

The three overlapping critical fields of sf theory, dystopia, and ecofeminism also feature inherent contradictions. It is worth complicating the core concepts of these three disparate yet related fields. Unlike utopia, for instance, dystopia does not offer a hypothetical future worth striving towards or a mirror upon which the troubling aspects of contemporary society are reflected. Instead, dystopian works proffer extrapolated worst-case future scenarios based on current trends—but also ones that tend to revel in the fun of collapse. In her seminal article, “The Imagination of Disaster,” on sf’s appearance in the cinema of the 1950s and 1960s, Susan Sontag opines: “one can participate in the fantasy of living through one’s own death and more, the death of cities, the destruction of humanity itself [...] the science fiction film is concerned with the aesthetics of destruction, with the peculiar beauties to be found in wreaking havoc, in making a mess” (44). Sontag appraises the appeal and fun of destruction, collapse, and Armagedon. It is on this basis that dystopia, inherently concerned with portraying such apocalypse, finds its widespread appeal.

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Furthermore, in their discussion of the climate fiction (cli-fi) eco-dystopias of the twenty-first century, Rowland Hughes and Pat Wheeler posit: “Apocalyptic visions have the power to transfix their audience with horror, to command attention and shock people out of a position of comfortable apathy” (2). One recurring zone of redemption that arises in such contemporary cli-fi eco-dystopias as the films discussed in this chapter, as well as many others like The Hunger Games films (2012–2015) based on Suzanne Collins’s trilogy of novels, George Miller’s Mad Max: Fury Road (2015), and Zeek Earl and Chris Caldwell’s Prospect (2018), to list but a few, is the dual connection and source of hope provided by both women and nature as sources of absolution from the perceived hypermasculine excesses of war, industry, and technology. Although there are shared threads of redemption through female bodies and the natural environment in Avatar and Interstellar, I work to complicate these themes by seeing where such paradigms do not appear and where the puzzle pieces do not fit so neatly together, offering a more nuanced consideration of these and other pictures. What emerges instead, then, is a diverse array of pathways that break down static and concrete binaries, some complementary and others contradictory.32 While the antagonists in each of these case studies are indeed white males intimately connected with heavy industry and machinery, and those placed in opposition to them are often women boasting some overt connection to nature and motherhood, the lines are not so simply drawn. These blurred boundaries, and what the sf genre, dystopia, and ecofeminism can

32 These traits also appear in the concept of the heterotopia, examined in more detail and applied to James S.A. Corey’s The Expanse saga in Chapter 4.
help uncover about them, provides a template for a diverse, varied, and multivalent path forward in the face of contemporary environmental and human social justice issues, as well as a reflection of such trends in the sf cinema of the 2010s, a hint offered by dystopias not towards “the dawn that never comes” of utopia, but the diverse, vibrant, and livable goal of the heterotopia.

*Avatar:* “They killed their Mother, and they’re gonna do the same thing here.”

*Avatar* premiered in London on December 10, 2009, and was released worldwide later that same month. Directed, written, and produced by Canadian filmmaker, environmentalist, and deep-sea explorer James Cameron, the film cost approximately $240 million to make, but after earning nearly $2.9 billion globally it quickly became the most financially successful movie ever released (Tartaglione). *Avatar* features an all-star cast—Sam Worthington, Zoë Saldana, Stephen Lang, Michelle Rodriguez, and Sigourney Weaver—and includes live-action footage combined with extensive use of motion capture technology for CGI sequences to fully realize the film’s immersive sf storyworld. *Avatar* is set in the mid-twenty-second century on Pandora, a densely forested moon orbiting Polyphemus, a fictional gas giant in the Alpha Centauri star system. Pandora features lush

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33 Sigourney Weaver has, of course, been a favorite of sf fans since first appearing as the iconic Ellen Ripley in Ridley Scott’s *Alien* (1979) and its sequels James Cameron’s *Aliens* (1986) and David Fincher’s *Alien*³ (1992).

34 In addition to the classical references at play with names like Pandora, Polyphemus, and the human colony Hell’s Gate, there are also intertextual sf allusions. Both Polyphemus and Hell’s Gate are also the names of Martian towns along the Grand Canal in Kim Stanley Robinson’s *Mars* trilogy, a utopian parallel to the anti-utopian or dystopian narrative and themes of *Avatar*; the use of Alpha Centauri is also common in sf, as it is the closest star system to our own. The popular sf video game
vegetation and native lifeforms, including the Na’vi, a species of blue-skinned, three-meter (ten-foot) tall sapient humanoids with a tribal culture. Humans acting under the auspices of the quasi-governmental enterprise Resources Development Administration (RDA) explore and develop Pandora to mine unobtainium, a fictional mineral room-temperature superconductor desperately needed on Earth due to resource-depletion, a looming energy crisis, and general environmental collapse. Jake Sully (Sam Worthington), a paraplegic former Marine, replaces his deceased identical twin brother as the operator of a genetically engineered Na’vi body controlled remotely by the brain of a human—the film’s titular avatars. After immersing himself in the local Na’vi tribe (whose village happens to sit atop an immense deposit of unobtainium), Sully falls in love with Neytiri (Zoë Saldana) and shifts loyalties to support the Na’vi, along with exobiologist Dr. Grace Augustine (Sigourney Weaver) and combat helicopter pilot Trudy Chacón (Michelle Rodriguez). This conflict leads to an epic battle between the Na’vi and their human and animal allies against the RDA security forces led by Col. Miles Quaritch (Stephen Lang) and colony administrator Parker Selfridge (Giovanni Ribisi). The film concludes with the defeat of the RDA forces, with all surviving humans save a few exceptions expelled from Pandora and forced to return to the dying Earth. With his

Sid Meier’s Alpha Centauri (1999) offers a similar narrative to the one envisioned in Avatar. Players of the series attempt to establish their own utopia on Planet, an exoplanet in the star system, but are fractured by differing political ideologies that divide the human colonists in seven distinct factions: the scientist, the environmentalist, the mogul, the humanitarian, the survivalist, the fundamentalist, and the collectivist.

35 “Unobtainium” is a traditional MacGuffin plot device in sf that serves as a stand-in for a hypothetical, fictional, or impossible material, such as the cavorite in H.G. Wells’s The First Men in the Moon (1901), the scrith in Larry Niven’s Ringworld (1970), or by the name unobtainium in films like Avatar and The Core (2003).
human body failing, the final moments of the film conclude with Sully’s mind being permanently transferred into his Na’vi avatar.

*Avatar* is in many ways a distillation of the sf subgenres of cli-fi, cyberpunk, and cyberpunk’s derivative offshoot biopunk (due to its use of biotechnology and the blurring of organic with synthetic), mixed and decanted into a sort of explicitly environmental post-cyberpunk for the early twenty-first century. The cyberpunk movement’s origins appeared in the late 1970s, when the dystopian impulse in sf turned largely from political collapse to technological excess and “the omnipresence of the machine” (Napier 329). The moniker “cyberpunk” is “drawn from both cybernetics and from punk music and fashion [with] detractors decrying its world-weary cynicism” (Harris-Fain 42). Prominent cyberpunk dystopias include John Wagner and Carlos Ezquerra’s comic *Judge Dredd* (1977), William Gibson’s iconic *Neuromancer* (1984), and Bruce Sterling’s edited collection *Mirrorshades: A Cyberpunk Anthology* (1986), as well as films like George Miller’s *Mad Max* (1979) and Ridley Scott’s *Blade Runner* (1982). As the predicted future of many cyberpunk works slipped into the historical past without the total collapse of human society, even with the proliferation of technologies like cellular phones, personal computers, and the Internet in the early 1990s, cyberpunk narratives likewise transitioned, and post-cyberpunk iterations of “lowlife and high tech” appeared in works such as Neil Stephenson’s novel *Snow Crash* (1992), Luc Besson’s movie *The Fifth Element* (1997), and the Wachowskis’ *The Matrix* (1999) and its sequels.\(^{36}\) By the twenty-

\(^{36}\) Cyberpunk’s aesthetics, however, remain in vogue, even if the genre’s prescience does not. In December 2020 the video game developer CD Projekt Red released the widely anticipated *Cyberpunk 2077*. Even reviews that critiqued the game’s technical issues praised its sleek, “retro-futuristic
first century, this vein of sf "reflected a prevalent sense that typical Western subjects
were essentially victims of their own society and culture [...] that life had somehow
become false or artificial" (Higgins 44). This movement within sf came crashing
down with the Twin Towers following the 9/11 terrorist attacks, after which much
of mainstream sf took a militaristic turn, with David M. Higgins noting: “the trope of
alien invasion was appropriated in the post-9/11 period to directly address
anxieties concerning terrorism, terrorist attacks, and America’s war on terror” (46).
Avatar seems to combine the post-cyberpunk obsession with high-tech alongside
both environmental concerns and military invasion sf of the 2000s, except in
Avatar’s case it is the humans subjugating Pandora for resources rather than alien
invaders attacking Earth.

Although the post-cyberpunk movement "continue[d] the focus on a
ubiquitous datasphere of computerized information and augmentation of the body
but without the assumption of dystopia" (“Post-Cyberpunk”), by the arrival of the
2010s the social, political, economic, and environmental situation saw a renaissance
of post-apocalyptic or environmental-collapse based dystopias in both literature
and cinema. Such narratives as those that “specifically employ the scientific
paradigm of anthropogenic global warming in their plots” have been termed
“climate fiction” or “cli-fi” by Gregers Andersen (856). Andersen notes that such
narratives (like Avatar but also Interstellar) feature “the imaginary that
anthropogenic global warming will sometime in the future result in extreme social

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fantasy” styling (Coldewey); Cyberpunk’s canonical definition of “lowlife and high tech” was coined
by cyberpunk author Bruce Sterling in his preface to fellow cyberpunk author William Gibson’s short
story collection Burning Chrome (1986).
disintegration and human violence on a very large scale” (856). Early examples of cli-fi include Roland Emmerich’s blockbuster *The Day After Tomorrow* (2004), wherein global warming suddenly accelerates leading to worldwide, apocalyptic storms, and Cormac McCarthy’s *The Road* (2006), in which an unnamed father and son grapple with survival on the environmentally ruined landscape of a near-future Earth. Cli-fi and the eco-dystopia link the societal disarray of the canonical dystopias with the recurring theme of ecological degradation and collapse, be it from climate change or other environmental calamities. Such “contemporary dystopias do not begin with social issues, but from a posthuman nightmare,” notes Ânderson Martins Pereira, “they depict societies in [...] collapse” (745). These three related trends—cli-fi, eco-dystopia, and posthumanism—are all linked in films like *Avatar* and *Interstellar*. A key recurring element in these examples of dystopian cinema of the 2010s is the entanglement of social collapse, technological changes to humankind itself, and environmental degradation—in most recent dystopian visions, the three are often interconnected and cannot be easily parsed.

A recurring theme throughout *Avatar* is one of escape—of human individuals from the desolation of Earth; of humankind from the sins of industrialization; of Na’vi-supporting dissidents from the authoritarian RDA; of Sully from his broken human body; of audiences from their humdrum lives into sf fantasy. The movie extrapolates the environmental degradation and increasing pace of technological development of the early twenty-first century into the mid-twenty-second century, painting a dystopian portrait. At the same time, *Avatar* is a film replete with contradictions, wrinkles, and paradoxes, especially when viewed through the
tandem lenses of the sf genre and ecocriticism, especially its ecofeminist strain. Morton opines: “The movie *Avatar* was so successful because it speaks, and fails to speak, about issues related to ecology, environment, and world, some of the most pressing issues of our age […] *Avatar* acknowledges the philosophical and political dilemma we face around ecological thought while failing to resolve it” (“Pandora’s Box” 206). The picture has been widely lauded for its cutting edge (especially in 2009) special effects while at the same time its rehashed storyline (at least at first glance) has been heavily criticized. Franciska Cettl observes: “*Avatar* was generally praised for its spectacular CGI and 3D effects and criticized for its simplistic and formulaic narrative, a mishmash of the legend of Pocahontas, James Fenimore Cooper’s novel *The Last of the Mohicans* (1826) and films like *Dances with Wolves* (1990) and *FernGully: The Last Rainforest* (1992)” (225). Cettl offers a reexamination of *Avatar* (ten years after its release), focusing on the movie’s use of paradox and subversive binaries through its ecological and anticolonial themes. She notes:

> On the levels of both narrative and medium, specific hierarchical binaries are both delineated in the film, and such delineations are unconsciously undermined: between the technological and the organic, Western science and indigenous animism, Western technology and shamanic practice […] the undermining of these binaries functions as a decolonising gesture […] we can “stay with the paradox” and in this way decolonise science/fiction. (225)

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37 At the time of its release, *Avatar* was pejoratively coined “Dances with Smurfs.”
Cettl notes that although the surface story and film’s audiovisuals may indeed reinforce a variety of problematic binaries and stereotypes, it is the underlying elements that “unconsciously” undermine and therefore subvert the film’s more overt themes and motifs. In this way, Cettl proposes examining *Avatar* in much the same way I read Andy Weir’s *The Martian* in Chapter 1—against the grain—considering the film’s subtle paradoxes and disruption of troubling binaries rather than simply dismissing the film as a beautifully rendered but ultimately shallow cinematic blockbuster. Bron Taylor likewise notes the film’s inclusion and evocation of unintentional paradoxes and its uncanny ability to avoid any obvious labels, leading to a variety of viewer and critic reactions:

> The filmmaker and film have been labelled pro-civilization and anti-civilization, pro-science and anti-science, un-American and too American, anti-Marine and pro-Marine, racist and anti-racist, anti-indigenous and pro-indigenous, woman-respecting and misogynistic, leftist and neo-conservative, progressive and reactionary, activist and self-absorbed [...] pagan, atheistic, theistic, pantheistic, panentheistic, and animistic. (6)

As Taylor’s observation makes clear, a film that can be (and has been) interpreted in such directly contradictory ways must be rife with both obvious and subtle paradoxes and puzzles that make its themes difficult to pin down. Is Cameron’s movie an anti-science, misogynistic, reactionary screed, a pro-indigenous,
progressive, pantheistic romp, or does it lie somewhere in between? This contradictory and complex assessment of *Avatar* and its themes highlights Cettl’s emphasis on understanding *Avatar* through the lens of paradox—both its apparently intentional incongruities, but also deeper inconsistencies and enigmas that only come to light through increasing levels of examination and consideration, both of its narrative, characters, and settings but also its audiovisual and cinematic elements, including those beyond the screen to the production of the film itself.

On its surface, *Avatar’s* storyworld appears to be one of stark binaries, but many of these are either overtly or covertly subverted throughout the film in various ways. Some binaries are connected to both place—nature or civilization—and the essentialized, gender- and sex-based traits ecofeminist critics strive against, or what Kate Soper calls “the antithetical equivalence: woman = reproduction = nature versus man = production = culture” (140). The film embraces much of this historical paradigm aligning man with culture and woman with nature in its narrative and characters, but beneath this layer lies the paradox. The entire repurposed sf iteration of the Pocahontas narrative that runs through *Avatar*, for example, is a reimagining of the traditional story of the “cultured” male encountering the “primitive” female. Cameron’s film replicates the traditional tale, but on an alien world in the 2100s rather than North America of the 1600s: Sully is a white, American male (played by Sam Worthington, an English-born Australian actor) while Neytiri is a tribal Na’vi female (played by Zoë Saldana, a Black American actress). Sully is intimately connected to heteromasculinity, industry, technology, and culture—he has traveled across the vast ocean of space from Earth to Pandora,
he lives in the industrialized, high-tech human colony, he is a former Marine and trained in warfare and weaponry, and he meets Neytiri while inhabiting his biotechnological Na’vi avatar. Neytiri, meanwhile, directly embodies the essentialized traits of femininity, spirituality, and a deep connection with nature. Although all Na’vi are generally connected with Pandoran nature, especially when contrasted with the human colonizers of their world, Neytiri is especially so, as she is the daughter of her clan’s chieftain and priestess and will one day inherit the nature-based shamanic responsibilities of her mother. However, not everything aligns so neatly: Sully’s disability is mocked by the other soldiers on his arrival on Pandora, and his human body (though not his avatar) grows noticeably weaker and his legs more atrophied throughout the movie. Neytiri, on the other hand, is the physically larger, stronger, and more skilled warrior of the two, and it is she, not Sully, who defeats the villainous Col. Quaritch in the film’s climax. The film also dramatically reinforces some other essentialized traits through the hypermasculine (to the point of parody) human villains, especially Quaritch and Corporal Lyle Wainfleet (Matt Gerald), the grayscale industrial appearance of the human colony, fittingly named Hell’s Gate, and their mining of unobtainium ore to support their unquenchable capitalist need for energy and resources. The Na’vi, meanwhile, are directly connected to Pandoran’s nature through their Gaia-like deity Eywa, and the fact that they literally live in a gargantuan tree (known as Hometree), which houses the bones and spirits of their ancestors.\textsuperscript{38} The stark differences between the human

\textsuperscript{38} Hometree calls to mind other legendary and mythical trees: Yggdrasil, the immense sacred tree of ancient Norse cosmology; the Great Deku Tree in the Legend of Zelda universe; the Hexxus tree in
characters and their colony Hell’s Gate vis-à-vis the Na’vi and Hometree establish the film’s understanding of the humans’ connection to masculine “culture” and the Na’vi to feminine “nature,” but with noticeable ripples that muddy the waters.

Like Zoë Saldana’s Neytiri, other Na’vi characters are also played, somewhat problematically, by a variety of Black and Indigenous actors. CCH Pounder, a Black actress from British Guiana, plays Mo’at, the Na’vi spiritual leader; Cherokee actor Wes Studi serves as Eytukan, the Na’vi clan leader; and Laz Alonso, a Black American actor, plays Tsu’tey, Neytiri’s betrothed. Here, the film seems to form a polyglot of non-white actors with an emphasized connection to nature, calling to mind the troubling mythical paradigms examined by Shepard Krech III in his landmark study *The Ecological Indian* (1999): “it is not surprising that most reviews referenced the commonplace figure of the ‘ecological Indian’ in movies that seek absolution for the sins of industrialization and evoke desire for the re-enchantment with nature” (Adamson 143–144). David Mazel also notes that in “early environmental construction, natives were not part of the internal but external sphere, quite in keeping with prevailing notions of native peoples as ‘natural,’ as ‘children of the forest,’ and so on” (141). The Na’vi are an essentialized, stereotypical embodiment of the “ecological Indian” character in history and fiction, simply in alien form. Moreover, whereas the Na’vi are voiced by a variety of non-white actors, most of the RDA characters, with a few prominent exceptions, are white American

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*FernGully: The Last Rainforest* (1992); the Tree of Life baobab in *The Lion King* (1994); and, of course, the fateful mythical trees of the Garden of Eden.
males, or playing white American characters, or both. RDA also serves as a quintessential example of “petromasculine” power—the organization, led by hypermasculine white males, uses technology and heavy weaponry to overcome opposition and impose its authoritarian will on others, most obviously the Na’vi, but also dissenters within their own ranks like Weaver’s Dr. Augustine and Rodriguez’s Chacón.

Unlike the diverse and heterogeneous underpinnings of ecofeminism, its related yet distinct corollary, petromasculinity, is both well-defined and discrete in its formulation and its application; meanwhile, its manifestations appear far more concrete and entrenched in the world today. Whereas ecofeminism was first promulgated in a theoretical academic context, petromasculinity is a concept devised to explain observed phenomena, societal actions, and beliefs. Cara Daggett explains petromasculinity in her article defining it:

Through the concept of petro-masculinity, I emphasize the relationship—both technically and affectively, ideationally and materially—between fossil fuels and white patriarchal orders. While misogyny and climate denial are often treated as separate dimensions of new authoritarian movements, a focus on petro-masculinity shows them to be mutually constituted, with

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39 Many of the actors playing RDA characters, like Stephen Lang and Giovanni Ribisi, are white American males. Sam Worthington, on the other hand, is a British-born Australian actor, who affects an American accent and whose character formerly served as a US Marine. A conversation between Lang and Worthington’s characters discusses future US military adventurism around the globe in places like Venezuela and Nigeria; the film implies that their actions on Pandora are similar, writ large. In 2009, the film would likely resonate with the US invasions of Afghanistan and Iraq.
gender anxiety slithering alongside climate anxiety, and misogynist violence sometimes exploding as fossil violence. (28)

Through this framework, Daggett does not posit a new theoretical field like ecocriticism or an environment-based call-to-action like ecofeminism, but instead a lens through which to explain and examine historical and contemporary political and economic trends. Through several case studies, Daggett reveals how “fossil fuels matter to new authoritarian movements in the West because of profits and consumer lifestyles, but also because privileged subjectivities are oil-soaked and coal-dusted” (27–28). Theoretical petromasculinity reveals the connections between fossil fuels, toxic masculinity, and white authoritarian desires:

Whether it is the Proud Boys who proclaim white, Western chauvinism, or the coal rollers who revel in conspicuous pollution, Trump’s brand of fossil authoritarianism feels good because it bursts the constraints of liberal, Western hypocrisy. Despite the occasional pretense of innocence, fossil authoritarianism gets its kicks precisely because fossil fuel consumption has become undeniably destructive in an era of global warming [...] especially because it has become a game of life and death, of flirting with apocalypse. (41)

This flirtation with apocalypse comes true in the dystopian cinema of the 2010s. In Avatar (and Interstellar), the linkages between fossil fuels and environmental
collapse at the hands of the white authoritarian patriarchy come to fruition. At the same time, female heroes arise to oppose the destructive power structures to lead towards a social and environmental renewal. Like yin and yang, ecofeminism and petromasculinity therefore complement each other’s different yet related concepts while also reflecting blurred boundaries and rejecting such strict dualisms.

*Avatar* seems to offer a strong divergence between industrialized, white male colonizers and naturalistic non-white indigenous victims (and women), with little to no differentiation. Interestingly, in what is perhaps a case of real-world paradox, indigenous and other non-Western communities globally were not put-off by the apparent merging and subsuming of their disparate cultures and ethnicities into the “native” Na’vi:

What is astonishing about indigenous groups linking their own regionally specific movements to *Avatar* is not that a blockbuster film is playing in India or the Andes or the Amazon; it is that the “things” that *Avatar* is helping to “make public,” to use the language of Bruno Latour, are living systems (mountains, rivers, forests, deserts) that may help inaugurate a politics that is more plural not because the people enacting it are bodies marked by race or ethnicity demanding rights, or by environmentalists representing nature, but because they force into visibility the culture-nature divide that has prevented multiple worlds and species from being recognized as deserving the right to maintain and continue their vital cycles. (Adamson 156)
Joni Adamson notes the “astonishing” embrace of Avatar by indigenous communities globally, while also positing that the “relationships between Mo’at, Neytiri, and Grace illustrate that ‘all our relations’ also encompass relations between various human groups [...] and] that prevented the Indigenous Studies community from dismissing the film” (155). This embrace of Avatar—a film which seems to portray non-white Others in problematic ways—by indigenous and other marginalized communities hints to what is perhaps a more complex message, both socially and environmentally, beneath its rather straightforward framework.

Although Avatar seems to rely on wholesale replication of essential binaries, there are some disruptions to these standards and stereotypes, and not everything about the film aligns so neatly. Morton notes: “despite the surface-level anticapitalist and anticolonialist appearance of Avatar, the picture is more complex [...] on the one hand, it gives us a sense of being-in-a-world that I argue is strictly untenable in an era of ecological emergency; on the other hand, Avatar dissolves this very sense of ‘being-in’—taking with one hand what it gives with the other” (“Pandora’s Box” 206). Despite this brief reference to colonialism, Morton does not consider either the Indigenous or gender issues manifested in the movie, but focuses on philosophical and environmental considerations. However, for all the film’s reliance on the Pocahontas storyline and masculine culture versus feminine nature paradigms, there are important divergences that disrupt the film’s adoption of such clichés, complicating both the narrative and its potential messages. For example, not all RDA characters are white males. Sigourney Weaver’s and Michelle Rodriguez’s characters are women working for RDA, and neither is overtly connected to nature:
Weaver’s Dr. Grace Augustine is the film’s lead scientist, and Rodriguez’s Chacón is a military chopper pilot, although their characters are two of those that rebel against RDA’s authority. Weaver’s character in particular presents an intriguing paradox and interesting case study; she disrupts the film’s essentialized binaries between male and female, civilization and nature. Rather than being connected to nature, she leads the high-tech lab at the human colony and later a research outpost. Like Sully, she inhabits her own avatar to study the Na’vi, with whom she sympathizes, although they still regard her as an outsider. However, as an exobiologist, she works in a field that crosses the boundaries between traditional “science” and “nature.” Moreover, Grace has a fraught relationship with the Na’vi and occupies an unstable position between them and the RDA forces. Daniel Heath Justice, writing for First Peoples, opines that Grace’s research on the Na’vi offers a “muted critique of academic colonialism,” which Adamson points out “focuses a spotlight on the danger—and potential—of historical ‘legacies of interface’—between indigenous peoples, colonizers, armies, teachers, preachers, and scholars” (155). Grace, therefore, although avoiding the traps of essentialization, nevertheless proves problematic in other ways.

Like Avatar’s multilayered characters, there is also an additional layer to the film’s subversions at a technical cinematic level. Avatar “depends upon a massive technological apparatus—and yet it cannot speak about this layer directly, for fear of destroying its message” (Morton, “Pandora’s Box” 220). Paradoxically, through CGI, it is the “natural,” native Na’vi characters that are rendered entirely through high technology, while the “civilized” RDA characters are portrayed through
traditional filming techniques. *Avatar’s* conventional live-action sequences, which comprise approximately 30% of the movie, were filmed using Sony cameras and Fujinon lenses—relatively standard for the industry at the time. However, the remaining 70% of the film comprises CGI based on state-of-the-art motion capture technology, including an entirely new camera system setup devised by James Cameron and Vince Pace, known as the Fusion Camera System (Holben). *Avatar’s* production also relied on “gigantic cloud-based computing systems that enabled a worldwide distribution of artists and other technicians to work in sync” (Morton, “Pandora’s Box” 220). This delineation presents yet another intriguing anomaly within the film. The Na’vi, overtly connected to “nature” in the film, are in fact highly synthetic—in a word, they do not exist, other than as images on a screen. Not only do they not exist in the traditional sense (there are no Na’vi, obviously), they also do not even exist in the physical world as costumes, props, or make-up effects. Without state-of-the-art computing technology there can be no Na’vi; the same, of course, cannot be said about Ewoks, Vulcans, or xenomorphs, or other traditional Hollywood extraterrestrial creations, pushing *Avatar’s* aliens into a surreal fantasy beyond that of even most science fictions. Pandora, of course, also does not exist, even in the traditional unreality of sf productions—the world is a surrealistic creation of computers and green-screens, not the massive sets or exotic southern California locales of many historical sf pictures. The Na’vi and their world are unreal.

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40 The same could be said of characters that exist only in the printed pages of a novel, of course, but even the high-tech, contemporary world of digital publications does not begin to approach the level of sophistication and use of state-of-the-art technology required to produce the quintessentially “natural” Na’vi.

41 Ewoks from *Star Wars*, Vulcans from *Star Trek*, or xenomorphs from the *Alien* films are all played by human actors using a variety of make-up, prosthetics, costumes, and props.
in totality: “Avatar is unable to speak the technologies that enable it” (Morton, “Pandora’s Box” 220). On the other hand, unlike the CGI Na’vi, the film’s human characters truly exist in a variety of ways. They are real human beings, playing characters on sets with costumes, being captured through traditional filming techniques. This divergence—between high-tech “nature” and traditional “reality”—presents an intriguing dynamic given the film’s utopian depiction of Pandora and dystopian imagery and narrative surrounding the human colony and Earth. This understanding complicates the film’s apparently simplistic themes, and leads into the picture’s potential uses of utopia and dystopia in crafting its environmental appeal. In this oxymoronic world of opposites, where nature is high-tech, futuristic humans are traditional, and reality’s lines are blurred, perhaps the film’s depictions of dystopian landscapes are similarly juxtaposed.

The CGI-rendered places and characters of Avatar may seem like a strange place for a consideration of dystopia, as the theatrical release of the film is set entirely on the vibrant forest-world of Pandora, which appears far more utopian (or even Edenic, which I consider later) than dystopian. Sean Cubitt opines: “Avatar is in many respects a painted paradise [...] in James Cameron’s fantasy of the planet Pandora, the specific new form taken by the utopian impulse responds to a new configuration in our relations with our environment” (227–228). Cubitt notes the importance of Avatar’s special effects to its utopian possibilities:

Animated films [...] have a unique opportunity to emphasize the potential over the actual [...] animations have expressed in thousands of forms a
yearning for beauty, innocence, harmony, anarchy, sexual liberation, peace or reunion with the world: all forms of utopian imaging, from the Edenic forest of Winsor [McCay’s] The Centaurs (1921) to the autonomous zone of Toontown in Who [Framed] Roger Rabbit? (Robert Zemeckis, 1988). (228)

These delineations, between the utopian and dystopian, between animation and live-action, or perhaps layers of both simultaneously, represent one of Avatar's many shifting paradoxes. While the verdant forests and bioluminescent lifeforms of Pandora are visually utopian, and the brilliant, lurid colors of the Pandoran forest starkly contrast with the grimy, muted achromatic grays of the human colony, the film’s human characters, perhaps ignoring their eyes and ears in an Orwellian sense, nevertheless consider the world a dystopian hellscape. The first hint of this recurring theme appears during Sully’s initial descent from orbit to Pandora’s human colony, known as “Hell’s Gate” (3:52). (See Figure 6, page 138). As seen in this screenshot, Hell’s Gate is introduced during Sully’s opening monologue very early in the film. Hell’s Gate appears visibly dystopian in a traditional sf way: the colony is awash in grays, blacks, gunmetal, and various shades of somber and muted military greens. Everything in the image is synthetic, from the attack helicopters and hovercraft to the soldiers bearing heavy weaponry to the distant factories belching smoke and soot into the air. Although Sully and the other characters wear breathing masks due to the poisonous qualities of Pandora’s atmosphere that make it unfit for humans (a recurring theme in recent sf dystopias), the image also implicitly connects such breathing apparatus with the human machinery and industry and
smog that dominate the colony. Scenes of the colony throughout the film follow this same pattern: ubiquitous technology and machinery fill the screen, colors are somber, muted, and tend towards grayscale, and a subtle background score is overcome by sounds of strained breathing, engines, and boots on concrete. In short, Hell’s Gate and its inhabitants are an archetype of anti-nature. Paradoxically, of course, is that fact that Hell’s Gate—particularly its interiors and its human actors—are the most traditional and natural aspects of the film; while the Na’vi and Pandora are totally CGI-generated, Hell’s Gate’s interiors and its actors are portrayed by actual human beings, in costumes, with props, filmed on physical soundstages.

Later, during Col. Quaritch’s briefing for the newly arrived RDA personnel, the film’s antagonist declares: “You are not in Kansas anymore, you are on Pandora [...] If there is a Hell, you might want to go there for some R&R after a tour on Pandora” (6:32). The film then oxymoronically connects the ideas of primeval jungle to dystopia. Here, the film’s narrative and dialogue directly contradict its audiovisual elements—when discussing previous deployments in Venezuela (which Quaritch refers to as “mean bush”) and Nigeria, Sully responds that he considers Pandora to be “just another hellhole” (21:31). Through Quaritch’s casual mention of Kansas and the line’s clear allusions in both the real and cinematic universes, *Avatar* invokes *The Wizard of Oz* (1939) and through it American pastoralism, a dual metatextual and intertextual reference that operates on multiple levels. This reference directly connects Pandora with Oz—both fantastic places far away from

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42 Or perhaps the Covid-19 pandemic still lingers into the late twenty-second century.
43 Whether intentionally or not, Quaritch’s “mean bush” comment resonates with the trope of the *vagina dentata* given the film’s overall gendering of nature.
Earth, one a distant world and the other a dreamland. On a cinematic level, as well, Cameron also draws a comparison between the 1939 film’s groundbreaking use of Technicolor and other cutting-edge filmmaking techniques trailblazed at the time, not unlike *Avatar's* own use of the new cinematic technologies seventy years later. Moreover, both Oz and Pandora are made visually fantastic through the use of brilliant colors—the Technicolor Oz and brilliantly CGI-illuminated Pandora—in contrast to the black-and-white Kansas or muted grays of Hell’s Gate.\(^4\) Both films also intentionally play with motifs of fleeing and environmental escape, be it leaving behind the humdrum, deprived prairie life during the Dust Bowl and Great Depression of the 1930s or the environmental collapse of twenty-first (and extrapolated twenty-second) century Earth. But here is the key: Oz and Pandora are fantasies—and just as Dorothy could no more trade Kansas for Oz, RDA’s attempts to colonize Pandora as a supplement to Earth proves just as unrealistic. The idea that Pandora is a fantasy—a visually utopian yet deadly dystopian one—informs a reading of *Avatar's* layered contradictions. Dorothy must eventually return to Kansas to live her life there, just as the humans are forced to leave Pandora and return to Earth. This is one of *Avatar's* many lessons—humanity cannot live in a dreamworld among the stars, we must focus on the real planet we have.

Not unlike the dual personas of the titular wizard of Oz, *Avatar's* avatars add an intriguing additional level that further disrupts the supposedly clean and

\(^{4}\) Moreover, the allusion calls to mind other parallels between the two films and their themes: the simplified conflict between good and evil; the mistreatment of non-human animals and environmental degradation; and, perhaps most interestingly, the dual physicalities of characters—the humans and their avatars and the eponymous wizard’s fantastic apparition versus the “man behind the curtain.”
formulaic nature/culture paradigm depicted in Cameron’s film. Cettl asserts: “The [avatar] scenario very problematically stages Jake’s abandonment of his ‘flawed’ paraplegic body in favour of his biotechnological avatar, celebrates an idealised version of nature associated with femininity, and invites us to identify yet again with the white man as leader of the natives” (226). It is indeed problematic (and very Pocahontasesque) that Sully, the white foreign male, becomes the symbolic leader of the Na’vi in their resistance against colonial oppressors. It is also troubling that Sully’s decision to ultimately leave his white, male, human body is primarily attached to its flawed paraplegic status, rather than any innate desire to transform or change. Sully’s entire character arc is linked to his disability—it is the money he hopes to make on his deployment to Pandora that he plans to use for surgery to right his paraplegic condition, a carrot that RDA tempts him with throughout the film, before bringing the stick of direct military intervention when this ploy fails.45 Writing for Feministing, one critic wonders: “Will this be the first time I’ve seen a movie where the main character with a disability hasn’t been magically ‘cured’ by the end? […] the Sci-Fi plot phenomenon of characters who miraculously regain their able-bodied privilege is pervasive” (Ariel). This microcosm of ableism in Sully’s story not only conveys the “theme that his human body is inadequate” (Ariel), it also features larger implication for human and environmental concerns in the twenty-first century, a time when humans have the ability to drastically alter not only our

45 According to an ABC News report, many viewers with disabilities were excited by the prospect of a blockbuster film featuring a wheelchair-bound hero, others were troubled by the film’s inaccuracies in depicting disabilities and the casting of the able-bodied Worthington to play a character with spinal-cord injuries. According to Phil Klebine, a counselor and tetraplegic: “I do think it’s an advance in seeing people in wheelchairs in the entertainment industry […] I just wish people who have a disability get a chance to play those roles” (Cox).
bodies but our planet as well. If *Avatar* implies that the human body is inadequate (not only Sully's damaged body, but the human body on Pandora generally), and it seems to, does it also imply that Earth itself is inadequate? Or perhaps that humans are better off remaining on the planet where we evolved? *Avatar* seems to offer these critiques of contemporary humanity and our environmental shortsightedness, but without offering alternatives. In the end, it is not science that saves Sully or “cures” his disability, but Pandora's Gaia-inspired pantheistic nature. Although this ending has the feel of a *deus ex machina*, Sully's transformation also evokes another one of *Avatar*'s underlying principles—humans must be willing to change themselves. Whether taken literally or figuratively, the idea of humans adapting themselves, rather than forcing the physical environment to change for them, is an enduring aspect of Cameron's movie. Morton observes: “Yet at the end of *Avatar*, the ‘alien’ humans must return to a poisoned Earth, and we must exit the cinema” (“Pandora’s Box” 214). The film seems to imply that humans would be better off without being human, but when we exit the cinema (or turn off our televisions or monitors) at the film’s conclusion, we nevertheless remain in our human form.

*Avatar* alludes to religious and metaphysical themes beyond our physical reality and our human bodies that are intimately connected to humanity's relationship with the physical environment. The picture accomplishes this through its audiovisual elements as well as its plot and dialogue. Early in the film, during Sully's initial exploration of the Hell's Gate compound in his new avatar body, the film directly evokes notions of Genesis and Eden. As Sully awakens in control of his Na'vi body, he is overcome with excitement at the thrill of being able to walk and
run again. He ignores medical technicians and exits the science building to wander the Hell’s Gate grounds. (See Figure 7, page 138). He begins running through a cultivated garden, filled with exotic Pandoran plants and trees. He then encounters Dr. Augustine in her own avatar body. She tosses him a piece of fruit, which he consumes. Thus begins Sully’s character arc from emotionally damaged, paraplegic former Marine to savior of the Na’vi and Pandora. In this image, Sully, in his Na’vi avatar, takes a bite of the Pandoran fruit offered by Grace with gusto. This image could not contrast more starkly with the prior one of the colony’s industrial area. Verdant green trees loaded with yellow fruits dominate the scene, a bright blue pond lies in the near distance, and majestic mist-shrouded mountains loom in the background. Simple brown wooden structures rise in the middle ground, in contrast to the industrial, metallic edifices of Hell’s Gate. The scene and Pandora’s climate are explicitly tropical, and they either reinforce or play with a reading of Sully as the white imperialist man “going native” in the tropics. Sully, now maskless in his Na’vi body, gorges himself on a plump purple fruit (in contrast to the highly processed rations the humans eat when inside the colony). But the garden is still artificial—it is a cultivated landscape, like Eden itself, rather than the true “nature” of Pandora. Despite the common understanding of Eden as idyllic nature, Carolyn Merchant notes in *Reinventing Eden* that the term “garden” is “the common designation in the biblical Hebrew for irrigation-supported agriculture” (13). The Biblical parallels in this scene are overt, but in many ways inverted and complicated. Rather than paradise, the setting is the cultivated garden of the decidedly dystopian Hell’s Gate colony. The garden is not natural, but planted and maintained by humans, in either
their mechs or biotechnological avatars. Sully and Grace are imperfect stand-ins for Adam and Eve, one a disabled Marine and the other a chain-smoking scientist, both in Na’vi bodies. However, the parallels are clearly present, and Avatar appears to be ironically playing with such themes to bring them to mind, if not allude to them directly.

As discussed in Chapter 1, environmental concerns often run parallel to societal ones, especially in sf cinema and literature of the long 2010s. In her collection of essays *Braiding Sweetgrass*, Robin Wall Kimmerer notes the importance of humanity’s varied origin stories on human-environment interaction, comparing the Anishinaabe story of Skywoman with Biblical Eden legend:

On one side of the world were a people whose relationship with the living world was shaped by Skywoman, who created a garden for the well-being of all. On the other side was another woman with a garden and a tree. But for tasting its fruit, she was banished from the garden and the gates clanged shut behind her. The mother of men was made to wander in the wilderness and earn her bread by the sweat of her brow, not by filling her mouth with the sweet juicy fruits that bend the branches low. In order to eat, she was instructed to subdue the wilderness into which she was cast.

Same species, same earth, different stories. Like Creation stories everywhere, cosmologies are a source of identity and orientation to the world. They tell us who we are. We are inevitably shaped by them no matter how distant they may be from our consciousness. One story leads to the
generous embrace of the living world, the other to banishment. One woman is our ancestral gardener, a cocreator of the good green world that would be the home of her descendants. The other was an exile, just passing through an alien world on a rough road to her real home in heaven. (6–7)

Kimmerer notes the importance of origin stories and cosmologies to humankind’s relationship to the planet, something highlighted in Cameron’s film. It is the white male RDA employees—the descendants of Eve—who have not only exploited their ruined Earth, but now seek to do the same to Pandora. By recasting Eden and its notions of Original Sin and mastery of the natural world, Avatar recreates the same colonialist horror that occurred in the Americas on Earth, but now replaying once again with the human colonists on Pandora. Meanwhile, the Indigenously inspired Na’vi, who show a deep connection to their natural world through their Gaia-like concept of Eywa, serve as a stand-in for the offspring of Skywoman. But unlike Skywoman, who also arrived from above, the humans landing on the alien moon do not share a respect for Pandora’s natural environment with the Na’vi, but bring their destructive, exploitive habits with them. Kimmerer concludes: “Look at the legacy of poor Eve’s exile from Eden: the land shows the bruises of an abusive relationship” (9). The echoes of Eden appear throughout Avatar.

This understanding of Avatar also relies on an ecofeminist analysis of the film. Karla Armbruster posits something of a working definition of ecofeminism, noting its “important connections between the oppression of women and the destruction and misuse of nonhuman nature within male-dominated cultures” (97),
and delineating its purpose: “central to the ecofeminist agenda is the goal of individual, social, and ideological change—specifically, change that will improve the cultural standing of women and nature” (101). Catherine Diamond builds on Armbruster’s proffered definition, asserting: “the hierarchy of dualisms that divide the world and valorize the male side, such as nature/female and culture/male, has to be dissolved to allow more nuanced interconnections” (72). Ecofeminism directly rejects such essentialized historical and traditional binaries as woman/nature and man/culture. Diamond goes on to note:

Ecofeminism both reasserts affinities within complexities of nature and breaks down assumptions about simplistic identification [...] It insists on a plurality of responses [...] Ecofeminism cannot merely reverse patriarchal dualisms that insist on mutually exclusive qualities by upending the value hierarchy, nor can it deny affinities, but it must loosen boundaries, dispense with binaries, and allow for permeations, elisions, and the illumination of connections increasingly occluded by sophisticated technology and corporate production systems. (72–73)

Here, as Diamond stresses, ecofeminism works against the formation of simplifications and essentialized binaries. Ecofeminism also offers a theoretical basis for examining the interconnectedness of environmental conservation and progressive human societal concerns that appear in Avatar (and Interstellar) through one unifying critical lens.
*Avatar* plays overtly with notions of Eden, the Fall, and Recovery through its imagery and narrative. Redemption or absolution, moreover, lies at the center of the film’s story. Merchant describes and analyzes the historical Edenic Recovery narrative in Western civilization. She notes that there are two complementary yet competing Recovery narratives that “explain how the human species arrived at the present moment in history [...] but the two stories have different plots, one upward, one downward” (11). The first story is the traditional Biblical Fall narrative, where Eden is lost but can be redeemed: “This first story—the mainstream Recovery Narrative—is a story of upward progress in which humanity gains the power to manage and control the earth” (11–12). The second tale is the antinomy of the Biblical narrative, and “instead depicts a long, slow decline from a prehistoric past in which the world was ecologically more pristine and society was more equitable [...] and] the absolute necessity of a precipitous, rapid Recovery exists today and could be achieved through a sustainable ecology and an equitable society” (12).

Despite the prevalence of these two narratives—one popular among Christians and capitalists and the other among environmentalists and feminists, Merchant also posits a third syncretic possibility that avoids the essentializing elements of the first two: “I argue that a third story, one of partnership between humanity and the earth and between women and men [...] is also emerging” (12). *Avatar* evokes notions of both Recovery narratives, and intentionally recalls Edenic and lapsarian themes throughout the film. James Cameron even went so far as to state that Pandora is “kinda the Garden of Eden with teeth and claws” (“Pandora”). But Eden, like Oz and Pandora, is also a fantasy. Whether or not such a place ever actually existed, there is
no going back, and although *Avatar* recalls such motifs, it offers no clear alternative path forward. As Spock (Leonard Nimoy) notes in *Star Trek II: The Wrath of Khan* (1982), another film that plays with notions of Genesis, paradise, and creation, “it has always been easier to destroy than to create.”

*Avatar* may offer some valid and compelling critiques on-screen, but simply identifying an issue and its problems is not nearly as useful as offering an alternate vision or recommended prescription for the ills of humankind and the planet.

At the film’s dramatic conclusion, other religious motifs are called to mind through narrative and imagery. After the Na’vi defeat the RDA forces, Sully is fatally injured during the final mêlée with Quaritch. Neytiri saves him and defeats the colonel, but Sully’s human body is failing. In the film’s final minutes, the Na’vi take Sully to the metaphysical center of their religion, the Tree of Souls. There, at the base of the tree, Sully’s mind is transferred out of his dying human body into his virile avatar form. Aside from cheating death, Sully also regains the use of his limbs through this transubstantiation. Sully therefore leaves his paraplegic, white body behind for a (blue) colored, strong Na’vi body.

There are multiple overlapping religious levels working simultaneously in this dénouement sequence. The Tree of Souls shares obvious resonances to the film’s noted Edenic imagery, with both the Tree of Life and Tree of the Knowledge of Good and Evil. (See Figure 8, page 139). Eywa, the all-encompassing spirit of Pandora, shares similarities with the

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46 Spock is discussing the Genesis Device with Kirk (William Shatner) and McCoy (DeForest Kelley), and their discussion bends toward both its philosophical implications and Biblical references.

47 It seems one of the only essentialized traits that cannot be changed in *Avatar* is one’s sex, which is interesting as the Na’vi do not appear to possess genitals.
pantheistic notion of Gaia, and Yggdrasil, the sacred tree that anchors the universe at the center of Norse cosmology. Sully's work as a savior and his seeming resurrection carry obvious Christian connotations, while the idea of rebirth and the interconnectedness of life on Pandora hint to the Hindu and Buddhist notions of samsara and reincarnation. *Avatar* also gestures to not only to the contents of Pandora’s box, but the mythological figure connected with unleashing curses and evil into the world in Greek mythology. Finally, the word “avatar” itself, and the blue-skin of the Na’vi, reflect overt references to Hindu deities and their various forms, often depicted as blue-skinned in religious iconography. This religious mélange imbues *Avatar* with a wide range of interconnected and overlapping beliefs, yet somehow forming a peaceful and cohesive whole. But this proves a false promise as well: “for all its visions of oneness, *Avatar* also invites us to see twos: humans and Na’vi, Earth and Pandora, floating islands and abysses, planets and space, modernity and ecology” (Morton, “Pandora’s Box 211). One could easily add more to Morton’s list: male and female, science and nature, war and peace, life and death, technology and environment.

In the end, *Avatar* offers a variety of messages, some obvious, some less so, many nuanced and others oxymoronic. Although on its surface the film provides a simplistic essentializing of binaries regarding sex and gender (male versus female), race (white versus non-white, or indigenous versus non-indigenous), and civilization versus nature, further examination reveals deeper calls for diversity and environmental conservation. Adamson, for example, notes: “The plurality being called for, then, does not stop at multiculturalism, but is a project that [...] might
more accurately be called ‘multinaturalism.’” (157) Cettl agrees: “on the levels of both narrative and medium, specific hierarchical binaries are both delineated and undermined in the film” (226). The film concludes with an overt environmental appeal and call-to-action, but one that also paradoxically left (and leaves) many viewers disillusioned, as Cubitt and Thomas note. Although Earth is never seen directly in the theatrical release of Avatar, Sully makes two direct statements about Earth’s environmental condition in the mid-twenty-second century. While rallying the Na’vi to fight back against the RDA, Sully declares about Earth: “There’s no green there. They killed their Mother, and they’re gonna do the same here” (2:08:50). Later, during the film’s epilogue scenes, Sully’s narration notes the remaining RDA personnel “went back to their dying world” (2:32:35). These quotes both directly state the film’s conservationist appeal—humans are killing their planet, their Mother Earth, and by the 2100s will be forced to search on other worlds for the resources they have consumed, wasted, or destroyed at home. This leads to the film’s final paradox: although an obvious environmental call-to-action, the brilliant CGI world of Pandora provoked an opposite effect in many viewers. Rather than encouraging them to engage with their world and protect its environment, the “ambivalence […] is apparent in media reports of ‘Avatar blues’ […] it brought a desire ‘to escape reality,’ which is also the meaning of the word ‘utopian’ when used derogatorily” (Cubitt 227–228). Rather than being inspired to save Earth as

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48 In addition to the theatrical release, there are two widely disseminated director’s cuts of Avatar, which do in fact feature scenes of Earth as a prologue to the film. In the theatrical cut, the story begins with Sully already in space on his way to Pandora, and Earth is never seen.
49 It is hard to reconcile Sully’s description of a denuded Earth with his earlier discussion with Quaritch about fighting in the “mean bush” jungles of Venezuela and Nigeria.
Cameron seems to have hoped, many viewers fell into depression, and some even became suicidal, at “not being able to visit [the] utopian alien planet” (Thomas). This sense of malaise—dubbed “the Avatar effect”—pits what may be Cameron’s and his film’s inherent optimism against its unexpected real-world results. Morton also notes this paradoxical result Avatar seems to manifest: “The very attempt to exit Earth ends the world, not by allowing us to float free in space, but by gluing us [ever] more tightly to the viscous gravitational pull of the aesthetic dimension [...] a dimension that Plato was quite accurate to describe as an evil realm of demonic magnetism” (“Pandora’s Box” 223). If we “stay with the paradox” of Avatar, as Cettl suggests, there are many intriguing, contradictory, and subversive aspects layered beneath its rather simplistic and hackneyed narrative. At its core, however, even early in the long 2010s, lies an earnest appeal to environmental conservation, but one oddly coupled with cosmic escapism, both in the journey to Pandora in the film’s plot, but also in the escape offered by fleeing the dim, gray world of industry and civilization for the brilliant CGI jungles of an alien moon.

The film’s apparent sentimental and openly conservationist turn, aside from promoting a sort of wholesale human unity, is explicitly acknowledged by Cameron. When accepting the Golden Globe Award for Best Picture, the director declared:

*Avatar* asks us to see that everything is connected, all human beings to each other, and us to the Earth. And if you have to go four and a half light years to another, made-up planet to appreciate the miracle of the world that we have
right here, well, you know what, that’s the wonder of cinema right there,
that’s the magic. (Taylor 5)

While certainly a laudable goal, this simplistic, sentimental, and undifferentiated
view of humanity and nature does not offer any possible solutions for the problems
that Cameron undoubtedly sees. Cameron, although a committed environmentalist
and vegetarian, is also the world’s third-wealthiest film director (behind only
George Lucas and Steven Spielberg), and the wealthiest 1% of the global population
produce more carbon emissions than the poorest 50% of the planet (Ivanova).
Although Cameron’s environmental contributions have been widely acknowledged
by the NRDC and others, he still produces far more pollution than a huge swath of
humanity, with pet projects like his deep-sea submersibles undoubtedly producing
extensive carbon emissions. And this is perhaps yet another puzzle in the cipher of a
film that is Avatar. The picture acknowledges a wide array of early-twenty-first
century human and environmental issues but offers few prescriptions outside of
vague platitudes and clichés, at least among those seemingly intended by the film’s
creators, Cameron in particular. Where does this leave us? Early in the long 2010s,
the world’s most successful movie ever produced warns against taking our planet
for granted (in a film that undoubtedly accumulated a massive ecological and carbon
footprint during its production) and space-faring adventurism but offers few
alternatives. In an unintentional result, the film’s warnings against cosmic escapism
from our planet’s woes resulted in many viewers facing a different kind of cosmic
escapism, but instead of one in space one in the animated virtual reality of *Avatar*. In the end, *Avatar* implies humankind cannot live in a dreamland or tech our way beyond our problems, but this is exactly what the state-of-the-art effects of the film do, leading to a jumble of mixed messages and depressed viewers. The beautiful dystopia of Pandora—a place deadly to humans—highlights *Avatar’s* paradoxical themes and unclear result.

*Interstellar*: “Mankind was born on Earth. It was never meant to die here”

Like *Avatar*, *Interstellar* offers several overlapping themes, but also shifting and evolving differences as the environmental concerns of the 2010s increased in intensity. British director Christopher Nolan’s film debuted in Los Angeles on October 26, 2014, and was released worldwide the following month. With a production budget of $165 million, the epic sf film grossed over $700 million globally, making it the tenth-highest-grossing film of 2014. The film was widely praised by critics and was nominated for five Academy Awards, winning Best Visual Effects. Nolan, known for his superhero and other sf films like *The Dark Knight* trilogy (2005–2012) and *Inception* (2010) also co-wrote the film with his brother Jonathan. Like *Avatar*, *Interstellar* features an all-star cast including Matthew McConaughey, Jessica Chastain and Matt Damon (both of whom appeared together again the following year in *The Martian*, discussed in Chapter 1), and Nolan-regulars.

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50 In Ernest Cline’s *Ready Player One* (2011) and its film adaptation of the same name (2018), humans living in the near future of 2045 actualize this possibility. Rather than fleeing their dystopian Earth for the stars, they escape it to live alternate lives in the virtual reality OASIS.
Anne Hathaway and Michael Caine (from *The Dark Knight* trilogy). *Interstellar* is set in the dystopian near-future of the mid-twenty-first century, where climatic and environmental changes threaten humankind’s survival on Earth. Nolan’s film opens to a series of documentary-, “talking head”-style interviews with seniors describing the omnipresent dust storms and hardships of their youth, overtly calling to mind the Dust Bowl environmental collapse of the 1930s on the North American prairies caused by severe drought and unsustainable agricultural practices. The movie then cuts to the dystopian world of 2067, where crop blights and dust storms plague the farm of Cooper (Matthew McConaughey) and his family. Following one particularly severe dust storm, strange patterns appear in the dust which turn out to be the binary code coordinates of a secret NASA facility, headed by Cooper’s former mentor Professor Brand (Michael Caine) and his daughter Dr. Amelia Brand (Anne Hathaway). Brand tells Cooper that Earth’s environmental collapse is accelerating due to the proliferating plant blight, which will make the atmosphere deadly to humans. A NASA mission—Project Lazarus—searches for new habitable worlds through a wormhole discovered near Saturn and features two possibilities: “Plan A” involves Brand completing the mathematics for a theory of gravitation that will allow humans to escape Earth’s gravity well in large space stations; “Plan B” relies on the use of the ship *Endurance* to transport an ectogenic “population bomb” of 5000 human embryos to establish a new human colony beyond the wormhole. *Interstellar* then follows Cooper, Amelia, and other scientists and NASA robots on *Endurance* as they search three planets for the ability to support life: one is a water world teetering on the edge of a massive black hole, one is a frozen ball of ice with
no surface, and the other is a barren desert that boasts a breathable atmosphere. Meanwhile, because of relativity, years pass on Earth, and Brand eventually dies of old age after mentoring Cooper’s daughter Murphy (Jessica Chastain), but only after revealing to her that Plan A has never been possible. The film concludes with Murphy successfully completing Brand’s gravitation equation with the help of Cooper and saving humankind from suffocation on Earth, while Amelia is stranded alone on the desert planet with only her remaining robot for company. *Interstellar’s* dénouement features humans living in a space station orbiting Saturn, with Cooper purloining a ship to travel back to the desert world to presumably establish a new human colony with Amelia, perhaps as a new Adam and Eve.

Like *Avatar*, *Interstellar* plays with notions of dystopia and utopia, with the lines blurring between the two. As in *Avatar*, the dystopian imagery and utopian impulses of *Interstellar* are directly tied to the idea of place, both in the intersection of the film and its depiction of the natural environment, and in its position as an sf text whose generic elements enable it to depict alternate worlds beyond our present Earth in both time and space. Unlike *Avatar*, on the other hand, where the filmic universe is limited to the Hell’s Gate colony and forests of Pandora, with no direct depictions of a future Earth, *Interstellar* offers such views and descriptions of Earth in the near-to-distant future as well as three other imagined planets, all with distinct and varying environments. Dystopian imagery and Sontag’s “imagination of disaster” run through the core of *Interstellar*, but the film nevertheless offers a message of hope and human resilience: “On its face, *Interstellar* is a film that depicts a sort of promethean promise of the human genius, saving itself through scientific
and technological means. However, this only tells half the story about the world of *Interstellar*. Images of collapse are prevalent throughout the film” (Andersen and Nielsen 628). Like *Avatar*, the dystopian qualities of *Interstellar* also come from two separate axes, the human and the environmental. In their study *Dark Horizons: Science Fiction and the Dystopian Imagination*, Tom Moylan and Baccolini Raffaela note that dystopia in sf traditionally manifests as visions of “organized forces of violence and oppression” (185). Films like *Metropolis* (1927), the *Star Wars* series (1977–2019), *The Hunger Games* (2012–2015), and *Blade Runner* (1982), to name but a few prominent examples, feature despotic governments focused on violent social and political control. However, at the same time, such dystopian visions also tend to unite authoritarian appetites with environmental degradation: the world of *Metropolis* is not only a police state, but an industrial wasteland; the capital of the despotic Galactic Empire in the *Star Wars* films is the city-planet Coruscant, an entirely urbanized world with no remaining nature; the post-apocalyptic future of the *The Hunger Games* films is likewise run by the authoritarian yet idyllic Capitol, with the oppressed population divided into Districts which specialize in supporting the Capitol with different natural resources. Finally, and perhaps most enigmatically, the cyberpunk tour de force *Blade Runner* (1982) features a dystopian, police-state Los Angeles consumed with technology, floating neon billboards, and urban decay, but what is perhaps most disconcerting about the film’s imagined future is the constant rain that defines the southern California climate.51

51 Interestingly, the film’s sequel *Blade Runner 2049* (2017) drops the constant-rain motif, instead utilizing an environment that fluctuates rapidly between extremes, from the rain of the original film to blizzards to a suffocating orange sepia tone, perhaps gesturing towards desertification.
Despite the long tradition of sociopolitical dystopia noted by prior writers like Moylan and Raffaela, a tandem environmental nightmare often runs parallel to even the more historical and canonical dystopian sf examples. *Interstellar* abounds with both dystopian motifs and similarly dystopian imagery. The storyworld of *Interstellar* does not mirror the overwhelming, despotic dystopias of other recent genre entries of the 2010s like *The Hunger Games*, the *Divergent* series, *Ready Player One*, *Blade Runner 2049*, or a wash of others, but instead offers a recognizable future in a state of slow yet prolonged collapse. The film starts with direct allusions to a historical environmental dystopia, the Dust Bowl of the 1930s that swept the Great Plains of North America, which the film compares directly to the situation of the film’s present in 2067 (3:04). Like the Dust Bowl, caused by human agricultural practices in a topography and ecology not suited for them, *Interstellar*’s dystopian future is similarly linked to food and food production; unusually, *Interstellar*’s dystopia realizes a forced return to agrarianism, rather than the more common hyperindustrial, technology-run-amok dystopias of many sf works. The film hints toward the agricultural and environmental peril that faces humankind, when Donald (John Lithgow), Cooper’s elderly father-in-law, points out, “They’re saying it’s the last harvest for okra. Ever” (4:51). Cooper laconically replies, “He should’ve planted corn like the rest of us” (5:02). Later, the film clarifies that corn is in fact the planet’s sole remaining crop, and humanity becomes totally dependent on maize monoculture (not unlike Watney’s total reliance on potatoes in *The Martian*). This over-reliance on corn—a cornutopia rather than a cornucopia, one might say—is highlighted during two meal scenes at
the Cooper farm. Early in the film, during breakfast, Cooper and Donald serve
breakfast to Cooper’s children, a hearty, nutritious meal of cornbread, pancakes
(presumably cornmeal-based), creamed corn, and corn syrup. (See Figure 9, page 139). Later in the film’s timeline, in the late twenty-first century, Cooper’s now-adult
children Murphy (Jessica Chastain) and Tom (Casey Affleck) enjoy a dinner of corn-on-the-cob, baked corn, and corn fritters.52 (See Figure 10, page 140). Although
humorous and subtle (the characters do not call attention to the corn in either
scene), these sequences nevertheless underscore humankind’s total reliance on a
single crop in the troubled future. These scenes not only evoke other food-based,
dystopian sf futures—like 1973’s canonical Soylent Green—but also present-day
farming practices that cause both human and environmental problems, including
the rise of GMO-based foods, widespread monoculture, and unsustainable
aquaculture and fishing practices.53

The collapse of human agriculture (and with it society) and reliance on corn
monoculture leads directly to the film’s central plot. After discovering what remains
of NASA, Professor Brand informs Cooper that although corn is a tough plant, it will
eventually succumb to the blight like every other crop.54 This sets up the film’s main
narrative: humankind must leave Earth behind, either through Brand’s Plan A or

52 For those like my spouse who dislike corn, the dystopian future of Interstellar is quite literally a
Hell on Earth.
53 Some relevant recent examples of these trends include Annabel Soutar’s Canadian drama Seeds
(2012) about GMO-canola monoculture in Saskatchewan; the recent Netflix documentary Seaspiracy
(2021) provides an examination of the many problems tied to global aquaculture and overfishing of
the world’s oceans.
54 An irony here is that corn is not really that tough, and corn agriculture requires massive use of
nitrogen, fertilizer, and water. The film also notes the penultimate crop to finally fail is okra—what a
grim future.
Plan B, if the species is to survive. By using the blight as the film’s main environmental antagonist, *Interstellar* avoids directly confronting contemporary environmental calamities like climate change that currently threaten humankind’s future, but the blight serves as an appropriate stand-in for climate change and other present-day environmental perils nevertheless. As Brand points out, blight thrives on nitrogen and changes the contents of Earth’s atmosphere, much like human-produced greenhouse gases responsible for climate change. Blight also destroys vegetation, denuding the planet, indicating that perhaps blight can be read as an analogue for the human species as well. Blight acts out of homeostasis with the rest of the planet’s ecology—it destroys the very plants on which it lives. In many ways, then, blight mimics humankind itself in the Anthropocene, while at the same time calling to mind a variety of contemporary environmental threats.

*Interstellar* raises some interesting questions in the time of environmental collapse and cosmic escapism of the long 2010s. On its surface, the film seems to suggest that humankind can use its technological prowess and ingenuity to survive beyond Earth. Patrycja Podgajna argues, "contrary to many dystopias offering nihilistic or anti-utopian denouements, Christopher Nolan’s apocalyptic vision clearly posits a progressive and definite possibility of utopian impulse" (52). Andersen and Nielsen agree: “This utopic vision [...] seems to have been fully regained by the end of the film. In fact, the brief images of life on Cooper Station very directly resembles a classic depiction of an idealized American middleclass life from the twentieth century” (630). Here, Podgajna as well as Andersen and Nielsen appear to take *Interstellar* at face value—it is true that the film posits humankind
surviving in space after fleeing a dying Earth, but another, counterintuitive reading of Nolan’s picture, I argue, makes at least as much sense. In the film, NASA does not attempt to set up a human colony on the Moon and they specifically bypass Mars, but rather they aim for three planets found through a wormhole in a different galaxy. These three worlds, intended as substitutions for Earth, are not only inadequate as replacements, but their extraordinary remoteness is also telling. Scientists currently estimate that our Milky Way galaxy, home to 100 to 400 billion stars, is home to at least one planet per star, or 100 to 400 billion exoplanets (Rabie). Given the rate at which exoplanets are currently being discovered with more advanced, orbital telescopes and new technologies like adaptive optics, this is likely a very conservative estimate. This raises the question: are there no other suitable planets for humanity closer to Earth in Nolan’s storyworld? *Interstellar* implies that the answer is no. Why must the *Endurance* venture not only past Mars, and not only past any nearby star, but to another galaxy entirely? Not only are there no habitable planets for humankind closer to Earth, but the other possible worlds visited in *Interstellar* are also themselves certainly not ideal. An examination of the film’s use of audiovisual elements reinforces this interpretation of Nolan’s imagined exoplanets.

As discussed in earlier chapters, nature has often been viewed through the lens of the sublime, dating to Edmund Burke’s foundational ecophilosophical text *A Philosophical Enquiry into the Sublime and Beautiful* (1757). According to Burke, the sublime is defined by such characteristics as obscurity, power, and immensity—such qualities tend to be found in nature rather than those that are human-
produced, such as immense mountains or the expanse of the ocean, but also in a
science fictional context with the vastness of planets or outer space generally, the
depth of geologic or evolutionary time, the possibility of other dimensions or planes
of existence, et cetera. Furthermore, Burke argues, color is also an important
characteristic of the sublime. He opines: “Among colours, such as are soft, or
cheerful, (except perhaps a strong red which is cheerful) are unfit to produce grand
images. An immense mountain covered with a shining green turf, is nothing in this
respect, to one dark and gloomy; the cloudy sky is more grand than the blue; and
night more sublime and solemn than day” (67). Burke argues that stark, contrasting
colors produce and contribute to the sublimity of an object. Csicsery-Ronay, Jr., also
notes the connections between the Gothic’s use of grotesque monstrosity and the
sublime, which he elucidates as two recurring traits of sf in his monograph *The
Seven Beauties of Science Fiction*. These characteristics date to even the earliest
foundations of sf, like Shelley’s *Frankenstein*. Massive, snow-covered mountain
peaks (like the Alps depicted in *Frankenstein*), are far more likely to affect the
emotions than verdant, tree-covered hills. Just as *Frankenstein* operates on Burke’s
understanding of the sublime, revealing their shared use of Gothic affectations, so
too does Nolan’s film *Interstellar*, which adopts much of the Gothic’s sense of
mystery and melodrama.

Nolan’s *Interstellar* also dabbles with Gothic themes and traits, but rather
than use the Gothic to critique its own generic elements and human hubris, Nolan
uses them to highlight the immensity and power of nature, and the inadequacy of
human technology to confront it despite the film’s surface-level technofix themes.
The movie does this in various ways through both its plot and characters but also its sounds and visuals. Nolan’s film uses and plays with many Gothic elements and themes: there is a hero with an assumed identity (Cooper, a NASA pilot, is forced by circumstance into farming), an evil villain (Mann betrays both his mission and his fellow astronauts), a mysterious, supernatural force (Murphy’s “ghost”), a quest (to find new habitable planets beyond the wormhole), and even a prophecy: “like the potatoes in Ireland and the wheat in the Dust Bowl, the corn will die [...] The last people to starve will be the first to suffocate” (29:02). This prophecy encapsulates the primary modus operandi of the characters in the film. To save humanity from the spreading blight, they must leave Earth behind. By using such Gothic elements in the film’s storyline and characters, Nolan also sets up the film’s use of similar genre-based motifs in the film’s audiovisual elements, particularly in his use of grand images to depict the movie’s various environments, both on Earth and on the three exoplanets.

The dystopian future depicted in *Interstellar* is very different from those imagined in its sf contemporaries. Unlike the ubiquitous technology, pollution, and overwhelming urban jungles of the storyworlds of films like *Bladerunner 2049* (2017), *Ready Player One* (2018), *RoboCop* (2014), or *Dredd* (2012), the dystopian vision offered by Nolan is, paradoxically, one of bucolic rolling farmlands and pastoral agricultural life. However, it is here that the danger lies. The movie presents its environmental threat visually when Cooper and his family attend a local baseball game, to watch the (very down on their luck) New York Yankees, eat popcorn, and drink (presumably corn syrup-based) soft drinks. As the few-in-
number spectators cheer on the players, a klaxon begins to wail. (See Figure 11, page 140). Here, in this screenshot, an outfielder looks over the baseball diamond and bleachers as a dust storm roils on the horizon. The storm looms large in the sky in the distance, making the humans and stadium in the foreground look small and insignificant. The camera slowly pans from right to left to reveal that the dust stretches far along the horizon, as the wailing siren underscores the danger. The audiovisuals not only emphasize humankind’s insignificance in the face of an immense and overwhelming nature (a theme that carries throughout the movie), but also the scale of the environmental calamity facing both humanity and Earth. The film then features a hard cut back to the documentary-style interviews from earlier, revealing the future as history, the die already cast.

Following their departure from Earth aboard the *Endurance*, the film’s interstellar protagonists bypass Mars and the Galilean moons of Jupiter to arrive at a wormhole orbiting Saturn that transports them to a distant galaxy. The three planets that the astronauts visit all feature wildly different environments, and each offer their own dystopian visions, and ones that can also plausibly be read allegorically as potential future iterations of Earth. Interestingly, unlike the fairy tale on which the concept of the ideal “Goldilocks zone” planet (properly known as the “circumstellar habitable zone”) is based, none of the three imagined worlds envisioned by *Interstellar* prove to be “just right.” The first planet the *Endurance* reaches is Miller’s world, the water planet. Like the post-apocalyptic flop *Waterworld* (1995), Miller’s world envisions an aquatic planet totally covered in water, perhaps drawing inspiration from a post-global warming Earth, after the
melting of the Greenland and Antarctica ice sheets. Unlike real, extrapolated sf settings like a future Earth or terraformed Mars, imagined exoplanets like those in *Interstellar* and other invented locales tend to be allegorical, because they are invented fantasies rather than physically real places. In addition to Miller’s world’s global ocean, its unusual location near a black hole causes massive, gravitationally influenced tidal waves that circumnavigate the planet. The crew, unaware of these waves, land in search of Miller, only to be overwhelmed by the tidal surges. (See Figure 12, page 141). In this image, the *Endurance*’s lander is dwarfed by a gargantuan CGI wave, which not only stretches across the horizon, but fills the frame entirely with water. The camera pans up to reveal the height of the wave, towering near the clouds. Visually, the wave mimics the earlier dust storm, aligning two elemental forces of nature and highlighting their sublime power in the face of small and seemingly insignificant humans and their technologies. As the wave rushes towards the astronauts, a loud metronomic melody ticks away the short time remaining before its arrival. Taken together, the water and ticking metronome gesture not only to the short time for action for the film’s protagonists, but also for humankind in the face of environmental calamity on Earth today. Cooper and Amelia miss their deadline—the wave swamps the lander, carrying away another astronaut too slow in returning to the spacecraft. The ship eventually returns the surviving characters to orbit, but only after paying a heavy price in blood, time, and resources.

After departing Miller’s water planet, the *Endurance* heads toward expedition commander Mann’s icy world. Although ecofeminist themes appear throughout
Nolan’s film, Mann (Matt Damon) encapsulates many of these. Mann (whose surname is telling), lies about the potential habitability of his planet to lure rescue from the Endurance, betrays and attempts to murder Cooper to hide his secret, and then tries to maroon the other astronauts to continue the mission on his own terms. Like The Martian, Interstellar also has a tendency to replay old paradigms, but with greater self-awareness. Like The Martian’s preoccupation with the older Space Race worldview of the 1960s and 1970s, Interstellar also replicates some of these themes: the astronauts and the mission are entirely American; the various leaders of the mission (Mann, Cooper, Professor Brand) are able-bodied, heterosexual white males; Mann highlights this outdated mode when he notes that he must assume command of the mission of help save “all mankind” (2:07:22), rather than the less gendered and more appropriate “humanity” or “humankind.” However, the film, despite embracing some of these traditional paradigms, also upends and pushes back against them at times, offering a layer of irony. Mann, despite being described as being the noblest and bravest, proves to be a coward; Murphy and Amelia, not Cooper or Professor Brand, turn out to be humankind’s saviors through their success in carrying out both Plans A and B, respectively; finally, despite implying that humanity can save itself through ingenuity and technology on its surface (a traditional core sf trope), the film in fact implies that

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55 Matt Damon, of course, also portrays Mark Watney in The Martian, although while Watney is a problematic yet likeable character, Mann is truly despicable in almost every conceivable way.  
56 It is ironic, yet likely totally coincidental, that while Matt Damon’s Dr. Mann attempts to purposely maroon his fellow astronauts in Interstellar, Matt Damon’s Mark Watney is accidentally marooned by his fellow astronauts the following year in The Martian.
saving Earth is a far better proposition than searching for a new home among the stars, but without directly or coherently stating this goal.

As with its visuals of Earth and Miller’s planet, the film’s portrayal of Mann’s world also helps convey its core, yet paradoxical, environmental themes. The first hint of danger on Mann’s ice planet appears as the astronauts descend through its atmosphere. The lander, about to fly alongside a cloud, in fact clips it, shattering a piece of its icy structure and setting off an alarm inside the cabin; fluffy clouds, generally considered innocuous, are here a source of danger. Cooper and Amelia arrive on the surface, and trek over a frozen waste to Mann’s landing site. (See Figure 13, page 141). In this image, Cooper peers down at Mann’s landing site, featuring tattered American and NASA flags dwarfed by the inhospitable landscape.

As on the water world and increasingly on Earth (both in the film and reality today), the atmosphere on the ice planet is poisonous to humans. As Cooper hikes towards Mann’s spacecraft, the icy expanse stretches across the horizon in all directions. Not only does it reach the horizon, but the frozen clouds and ice mountains loom over the landing site and astronauts in the top right of the screen, visually mimicking the dust storms and waves of the earlier locales. The danger inherent on this world is magnified further by its connection to the traitorous Mann. After all, it is “his” world, and like him it deceives. There is no surface beneath the ice, and there is no potential home for humankind on this frozen desolation.

In the movie’s climax and dénouement, Murphy completes the gravity equation with Cooper’s assistance and Amelia proceeds alone to the final planet, Edmunds’s world. Edmunds’s world is the last potentially habitable planet found
through the wormhole, and although the movie seems to imply it is the best place for humankind to establish a new home, it is nevertheless another inhospitable environment. Visually, Edmunds’s planet appears Martian—a ruddy and rugged desert, but with at least a somewhat breathable atmosphere. Here, in this screenshot, Amelia kneels by a cairn she has built for Edmunds’s tomb, as the barren, arid wasteland extends in all directions around her. (See Figure 14, page 142). No water or life is seen in any direction (except, perhaps, scrubland vegetation), and although she briefly removes her helmet at one point, she keeps it on for the most part, implying that although the atmosphere may not be immediately toxic, it is not ideal. As on the three other planets, the film once again visually juxtaposes human characters and structures with the immensity of nature. The derelict lander lies covered in rocks and dust in the foreground, with a small Amelia surrounded by the dry, rocky expanse. In the distance, barren mountains rise along the horizon, much like the dust storms, waves, and frozen clouds of the other planets. The film, in its closing narration, optimistically refers to this desert world as humanity’s “new home” (2:43:50).

*Avatar* and *Interstellar* offer an interesting case study on the use and question of dystopia and place within the sf genre, particularly cinema, during the cosmic-escapist zeitgeist of the 2010s. Unlike in literary texts, which can imagine and manifest any place in the words on the page, sf cinema must portray and display alien worlds and futures on the screen. As noted briefly in Chapter 1, whereas the Mark Watney in Andy Weir’s novel is unequivocally “on Mars,” the same is not true of Matt Damon’s Mark Watney in the film version. While the character Watney is “on
“Mars” in the movie, the actor Matt Damon is in fact in the *Wadi Rum* in Jordan, which serves as a very earthly stand-in for the Red Planet. This legerdemain has been true since the earliest days of sf, and the prevalence of Hollywood pictures has led to numerous jokes that countless alien planets bear an uncanny resemblance to southern California.\textsuperscript{57} The same, however, is not true of Pandora in *Avatar*. Pandora exists, not on Earth, nor in outer space, but as a virtual place. *Interstellar*, however, relies on the use of more traditional filming locations, but this in turn leads to other paradoxes (some of which I consider here and others I cover later in Chapter 4 in my discussion of the exoplanets of James S.A. Corey’s *The Expanse*). Four planets are portrayed in Nolan’s film—all are shot on Earth, but none are as they seem. Both Miller’s water world and Mann’s ice planet scenes were filmed in Iceland, at Máfabót and the Svinafellsjökull Glacier, respectively (Gunnarsdóttir). Edmunds’s world, however, follows the Hollywood tradition—the “planet” is none other than the Lucerne Valley in southern California (Alexandre L.). Lastly, and perhaps most paradoxically, is Nolan’s future Earth. Despite following the traditional NASA- and American-dominated mode of space exploration cinema (like *The Martian*), the rolling midwestern farmland of Cooper’s hometown is not in the United States, but in western Canada. The town portrayed in the film is Longview, Alberta, and the New York Yankees play at the local stadium in nearby Okotoks, both just south of Calgary (Baxter). There are multiple levels of irony at work here—a film about escaping Earth for beautiful yet deadly alien environments in fact relies on totally

\textsuperscript{57} The Vasquez Rocks in northern Los Angeles County are particularly famous for appearing frequently in *Star Trek* episodes of the 1960s and then in numerous later sf pictures (Lewis).
earthly places to represent them, while at the same time, a film with a strongly pro-American, traditional slant nevertheless uses a Canadian landscape to serve as a futuristic American heartland.

*Interstellar,* like *Avatar,* leaves several questions and puzzles unanswered. On its surface, *Interstellar* offers a techno-utopian message of hope in the face of bleak environmental and human societal catastrophe. After all, Cooper laments, “Mankind was born on Earth. It was never meant to die here” (36:58). Deeper, however, the film’s dystopian imagery and underlying themes are less clear. Podgajna argues the film is overall optimistic and utopian: “Oscillating between apocalyptic wasteland and progressive no place, Nolan’s futuristic space odyssey clearly illustrates the possibility of a utopian future in outer space” (55). Other writers, however, are less enthusiastic about the film’s potential techno-utopia: “it does not seem farfetched to imagine humanity repeating the story of Earth all over again on what Murphy tellingly calls ‘our new home’” (Andersen and Nielsen 631). On further analysis, however, the plot and themes of *Interstellar,* despite being very timely for the cosmic escapism of the 2010s, do not stand up to scrutiny. Despite having the help of future-humans, so technologically sophisticated that their power is nearly godlike, the three best potential planets for humankind besides Earth prove to be downright depressing. One is a temporally displaced water world, as equally bleak as the failed 1995 Kevin Costner epic. Another is a frozen wasteland with an

58 Here, again, as in its use of other more traditional sf modes, *Interstellar’s* dialogue chooses to use the outdated “mankind” rather than “humanity” or “humankind.”

59 Having seen the disappointing *Waterworld* in the cinema on opening day as a ten-year-old with my godfather in Baltimore, I feel justified in making this assertion.
ammonia atmosphere. The third, and supposedly best planet, is a xeric expanse devoid of any obvious visible vegetation or other life. If these are truly the best alternate-Earths that the omnipotent future-humans can offer as a lifeline to humankind in the late twenty-first century, then it is hard to imagine how *Interstellar* can be understood as anything other than a fervent call-to-action to protect our home planet while we still can. At the same time, even in the rolling monoculture cornfields of Nolan’s future Earth, choked with dust storms and overwhelmed by blight, humankind’s home planet seems a far more salvageable place than any of the alien worlds or unrealistic space stations. The film offers only a few sentences on the possibility of saving Earth before dismissing it, determined to declare that humanity’s future home is not on our planet but out among the stars. Perhaps Nolan’s film is truly blind to the inherent inconsistencies in its story and its logic, or rather, maybe it is making a statement about the myopic humans of today, like Elon Musk, Jeff Bezos, and others, looking to Mars and the stars for escape rather than striving to save the far more perfect planet our species already inhabits.

*Avatar* and *Interstellar* both imagine humanity’s future through the lens of the sf genre and the state of Earth in the 2010s. Both films, and many others of the decade like the short-lived TV series *Terra Nova* (2011) or the overlooked yet critically acclaimed film *Prospect* (2018), imagine dystopian futures where humans flee Earth for new resources, leaving the ravaged remains of our environmentally degraded home world behind. Yet, the new imagined exoplanets of the 2010s are far from utopian. The fictional worlds—though visibly beautiful—all prove deadly to humans, be it from their dangerous native lifeforms, threatening physical
environments, or toxic atmospheres. Despite offering a layer of technological utopian thinking on their surfaces, and the optimistic notion that even at its worst humanity can continue to struggle for survival, the underlying messages of the films are more discrete and paradoxical than they first appear. The films all imagine dystopias, both on Earth and in space. However, in the zeitgeist of the 2010s, with humankind failing to confront the crisis of climate change and other environmental calamities, the films remain optimistic at heart. They offer an admonition and a warning of humanity’s future, but one imbued with a sense of hope. What they do not offer, however, is any clear prescription for a way forward, a way towards a brighter future, a way towards both saving our planet and building a stronger human society. Morton notes this failing in Avatar; although he could just as easily be commenting on Interstellar or other dystopian pictures of the decade: "What Avatar gestures toward, then, is a genuine ‘postmodernity,’ a historical moment after modernity, in which humans have incorporated the nothingness that leaks out of Pandora’s box into a new way of being and thinking ecologically. It gestures toward this future moment, without ever quite being able to tell us to go there, or even wanting with all its heart to push us there" (“Pandora’s Box” 222).

Interstellar may directly hint at one possible choice. During the film’s climax, Cooper enters a spacetime tesseract (a four-dimensional cube) that allows him to send messages to his daughter Murph through Morse code and binary into their shared past. Cooper sends himself a simple four-letter message: S-T-A-Y. Do not leave your children and home behind. Although in the context of the movie the message relates to a father’s love for his forlorn daughter, a more universal reading
can be gleaned from Cooper’s signal. Stay on Earth. Stay on our Blue Planet, that even in its crippled state in the film remains far more ideal than any of the nightmarish exoplanets. Writ large, perhaps Interstellar is likewise telling humankind to stay home. Rather than looking for a new home among the stars, work instead to keep Earth livable and habitable, not only for humankind but for its diverse array of wildlife as well, lest we all end up subsisting on corn alone. But, in the end, Cooper’s plea to his past self falls on deaf ears. Cooper, fascinated with the stars and space, chooses to depart. Not only does Cooper fail to heed his own message, but Murph continues and successfully solves Brand’s Plan A gravity equation, and Amelia succeeds in reaching Edmunds’s world and commencing the Plan B ectogenesis “population bomb.” At the film’s conclusion, all of humankind has departed (or died on) Earth, and after briefly visiting his now-elderly daughter Murph on a space station orbiting Saturn, Cooper leaves again to find Amelia on Edmunds’s world, thus fulfilling the goals of the Endurance’s voyage.

Speaking of Cooper and Amelia and their potential offspring, one cannot help but notice that Interstellar concludes by setting the stage for a replaying of Eden on the barren plains of Edmunds’s desert planet; a new Genesis from their ectogenesis. This is interesting for several reasons. First, despite its gesturing towards new beginnings through newfound natural spaces and female heroes, Interstellar fails to fully commit to either of these ecofeminist paths. Although the imagined worlds of Nolan’s film do not possess the same problematic overt colonialism as Avatar (largely because the planets visited in the film are lifeless and do not host the Na’vi), the film nevertheless seems to offer them up as opportunities where humanity can
flourish after the decimation of Earth, despite their obvious drawbacks.

Simultaneously, although Murph and Amelia succeed in completing Plans A and B where Cooper and Brand falter, they proceed along the same path forged by the two men without considering alternative options. Like their fathers, the daughters never seriously consider trying to save Earth. They are better at carrying out the final goals logistically, but they remain just as myopic. In the end, then, maybe this is why *Interstellar* leaves us with the potential for Cooper and Amelia to serve as an updated, extraterrestrial Adam and Eve under an alien sky; perhaps they are just as likely to replay humankind’s failures once again. Hopefully, Morton would agree, the descendants of Cooper and Amelia on Edmunds’s world do not one day stand “in tears amid the alien corn.”

There remains something of an unofficial postscript to *Interstellar*, a noncanonical, intertextual addendum. In February 2022, American software company Salesforce ran a Super Bowl advertisement featuring Matthew McConaughey with direct references and visual allusions to Nolan’s film, much like SodaStream did with *The Martian* two years prior (and discussed in Chapter 1). In the ad, McConaughey, dressed in a spacesuit remarkably like the one he dons in *Interstellar*, directly critiques cosmic escapism and its proponents:

Space. The boundary of human achievement. The new frontier. Eh. (shrugs). It’s not time to escape. It’s time to engage. It’s time to plant more trees. Hoo! It’s time to build more trust. Time to make more space, for all of us. So while the others look to the metaverse and Mars, let’s stay here and restore ours.
Yeah, it’s time to blaze our trail. ’Cause the new frontier? It ain’t rocket science. It’s right here. (Salesforce)

Complementing the narration, the commercial begins with a shot of McConaughey apparently in outer space, before ultimately panning to reveal that he is on a hot air balloon. He floats over San Francisco and the California desert, finally touching down near the Sierra Nevada mountains. Fortune described the commercial as “a subtle jab at [Richard] Branson, [Jeff] Bezos, and [Elon] Musk (who competed in the billionaire space race last year [in 2021])” (Chirinos). In an interview, McConaughey, who co-created the ad, noted: “I wanted this misdirect at the beginning [...] because we’re about to pull the rug out from under you. Some people are going to think this is going to be the trailer for Interstellar 2 [...] Hopefully businesses will see this and are urged and nudged to make a commitment to making life here on Earth more fair, equal and sustainable” (Malkin). The advertisement reveals that perhaps the fever dream of the decade’s cosmic escapism is beginning to break, the fascination with the problematic figures of Musk, Bezos, and others starting to wane. The commercial argues that whatever humankind’s problems on Earth—and they are admittedly many—we are nevertheless better off remaining here and rebuilding, rather than pursuing “rocket science” to escape to an imagined virtual world in “the metaverse” or an improbable new home on Mars or beyond.
Figure 6

(Avatar 5:50)

Figure 7

(Avatar 19:05)
Figure 8

(Avatar 2:34:04)

Figure 9

(Interstellar 3:58)
Figure 10

(Interstellar 1:29:44)

Figure 11

(Interstellar 18:12)
Figure 12

(Interstellar 1:11:14)

Figure 13

(Interstellar 1:35:38)
Figure 14

*(Interstellar 2:42:21)*
Chapter 3

Utopian Failures: Surviving on Basic, Terraforming Mars, and Consuming Kibble in James S.A. Corey’s The Expanse

This third chapter (and its companion fourth chapter) offers an ecocritical and utopian analysis of James S.A. Corey’s series of nine novels (2011–2021), collected intercalary short stories (2022), and television show (2015–2022) known collectively as The Expanse. Corey’s series is an sf space epic set at an unknown date in the distant but recognizable future, where humanity has colonized and begun terraforming Mars and moved into the asteroids of the Belt and moons of the outer planets, but is still limited to the solar system (at least when the series begins). This chapter focuses on the earlier texts of the sf saga. I divide the texts both temporally and thematically between, on one hand, the events and places in the Sol system, and, on the other, those settings beyond the series’ imagined ring-gate wormhole on hundreds of exoplanets. In this chapter, I examine the settings of Earth, Mars, and the Belt and consider how the series’ locales and plot—specifically natural and artificial ecosystems and unexpected, high-impact environmental events—affect these disparate settings and the humans living on or in them. I argue that Corey’s texts offer extrapolative critiques of present-day concerns under the guise of failed utopias teeming with human and environmental issues, ranging from

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60 James S.A. Corey is the pen name of American writing duo Daniel Abraham and Ty Franck.
61 A prologue to the first episode of the TV series sets the events sometime in the twenty-third century, but no exact dates are provided in either the literary or television series.
the governmental and political to the economic, social, and technological. I examine three recurring elements: Earth’s social support system known as “basic”; the Martian terraforming project; and the ubiquitous Belter food known as “kibble,” to serve as exemplars of this troubled utopian impulse. The texts utilize several recurring topics tied to notions of space and place: food and food production, the effect of gravity and environment on the human body, and the impact of technological accidents and highly-improbable events, among others, to comment on contemporary human and environmental concerns of the long 2010s. I argue that focusing on Corey’s use of place reveals not only *The Expanse*’s critical approach to utopia, but also an environmental and sociopolitical vision with implications for a variety of issues today, including multiculturalism and diversity, social welfare programs and the centralization of authority, and the current infatuation with cosmic escapism as a response to Earth’s anthropogenic ecological calamities and the crisis of climate change. Whereas Corey’s earlier novels hint through extrapolation that utopia itself is unsustainable and likely impossible, the later texts (discussed in the following chapter) offer an allegorical blueprint and potential alternative through the diverse and renewable heterotopian possibilities of the imagined exoplanets.

The main plotline of *The Expanse* follows a core group of four characters: James Holden, Naomi Nagata, Alex Kamal, and Amos Burton (the crew of the independent gunship *Rocinante*), and the events surrounding humankind’s discovery of extrasolar life in the form of the protomolecule—an engineered alien
organism that can retool existing life for a variety of purposes.\textsuperscript{62} Although the series begins with humans confined to the solar system, the protomolecule later opens a ring-gate wormhole that gives humanity access to over thirteen hundred unexplored and abandoned star systems. The first novel of the series, \emph{Leviathan Wakes} (2011), begins in sf noir fashion, and the space epic that unfolds over the next eight novels gradually increases in scale and scope as readers are introduced to topics as varied as political intrigue in the halls of the United Nations, soybean experimentation in the domes of Ganymede, family drama in an eight-person polygamous marriage, and an economic and demographic crisis on Mars, as but a few examples.\textsuperscript{63} \emph{The Expanse}, although on its surface the story of humanity’s encounter with extrasolar life for the first time (including all the messy and troubling implications and offshoots of that encounter), nevertheless offers a message relevant to the contemporary environmental and sociopolitical concerns that help define the prior decade, from the rise of and backlash to globalism, multiculturalism, and the chronic climate crisis that came to define the protracted decade to the economic emergency, Black Lives Matter (BLM), \#MeToo, and other racial and gender reckonings, and acute Covid-19 pandemic that ushered in its conclusion.

\textsuperscript{62} The term “extraterrestrial” refers to any life beyond Earth, whereas “extrasolar” means beyond the Sol system. The novels use the latter because all life currently living throughout the solar system (except Earth) is by definition also “extraterrestrial.” The protomolecule comes from another part of the galaxy entirely.

\textsuperscript{63} Throughout \emph{The Expanse}, Corey plays with genre. Whereas \emph{Leviathan Wakes} blurs sf, noir, and the police procedural, other novels blend differing genres: the space opera \emph{Caliban’s War} incorporates the political thriller, \emph{Cibola Burn} mixes sf and the Western, and \emph{Tiamat’s Wrath} adopts aspects of the \textit{bildungsroman}. I will discuss this playful multiplicity of genres more in Chapter 4, where its relevance to heterotopia is more relevant and apparent.
A twin commentary runs through the pages of *The Expanse* linked to its disparate settings and places; through extrapolation (within the Sol system) and allegory (on the exoplanets), the differing locales of Corey’s texts offer a variety of contradictory potential futures. Jameson observes: “The principal techniques of such narrative experimentation—of the systemic variation, by SF, of the empirical and historical world around us—have been most conveniently codified under the twin headings of *analogy* and *extrapolation*” (“World-Reduction” 223). The analogy—or allegory—Jameson mentions here is the same “literature of cognitive estrangement” Darko Suvin discusses in his foundational essay. In this form, sf comments on contemporary concerns through allegorical legerdemain—characters, settings, plotlines, serve as stand-ins with hidden meanings. A recent example of this sf form can be read onto the reimagined *Battlestar Galactica* TV series (2003–2009)—with readings ranging from a post-9/11 terrorism commentary (Higgins 46) to a religious adaptation “aligned with the New Testament” and apocalyptic visions in the Book of Revelation (Caron 5). On the other hand, sf also operates without such metaphorical sleight-of-hand, instead using “extrapolation developed according to its own inner logic and pushed to its ultimate conclusions” (Jameson, “World-Reduction” 223). In this case, sf does not offer an allegorical switcheroo, but imagines current trends at the time of writing (or filming) carried forward in time to a possible, anticipated future. A clear case of extrapolation occurs in Christopher Nolan’s *Interstellar* (2014), discussed earlier, which imagines where contemporary human societal trends and the related degradation of Earth’s environment may lead
if present-day human-environment interactions carry forward into the late twenty-first century.

In this chapter, I examine Corey’s extrapolated iterations of real places like Earth, Mars, and the Belt based on present-day trends. In the subsequent chapter, I analyze Corey’s imagined exoplanets as allegories that offer trenchant critiques but also potential alternatives to contemporary issues. Linked to the concept of place, Corey incorporates varying governmental and political structures featuring modified but recognizable social issues, ranging from various economic systems, shifting sexuality and gender trends, systemic poverty, racial bigotry, and a wide range of environmental issues linked to climate change, genetic engineering, and the degradation of Earth’s biosphere, to offer this critique. The novels position Earth, governed by the United Nations (UN), as something of a failed liberal state—half the population subsists on ubiquitous social welfare, ecological damage abounds, climate change has wreaked its heavy toll, and overpopulation stresses human and environmental systems to their breaking points. Beneath the surface of this troubled depiction of humanity’s home planet, however, remains great resilience, abundance, and promise, but in its current state Earth appears as a dirty, dismal failure.

Meanwhile, Mars (the Martian Congressional Republic, or MCR) is a conservative, militaristic work-in-progress, comprised of a citizenry preoccupied with turning the Red Planet into a terraformed, alternate Earth, free from its supposed malaise, decadence, and ennui. The official Martian dream is to build a utopia, and the population of the entire planet labors for centuries to make that dream a reality, only to have it all come crashing down. The Belt and beyond, de facto managed by
the quasi-governmental Outer Planets Alliance (OPA), is a region filled with natural resources from which the inner planets of Earth and Mars benefit, but sparsely peopled by a marginalized and impoverished utilitarian, survivalist population with anarchist and libertarian sympathies. Internecine political struggles define much of the Belt, and there remain many different competing factions within the OPA that run the gamut from not-quite-legitimate to radical terrorists. Throughout the series, the conflicts and prejudices that arise between Earthers, Martians, and Belters reflect not only an extension of contemporary racial and nationality issues, but those tied inherently to place and environment as well—what determines one’s fate is not where a person chooses to reside, but where they are born and come of age: “On Earth, they would have been a mishmash of Anglo and African, Asiatic and Polynesian. Here, they were Martian, and she was an Earther” (Corey, Cibola Burn 576). Environment and gravity, or what the texts call “environments of origin” (198), dictate identity and destiny more than any other single characteristic, highlighting the importance of place to any assessment of Corey’s series.

In the storyworld of The Expanse, the narrative space serves a far more important function than a mere background or traditional setting. This focus on the importance of place informs an ecocritical analysis of Corey’s epic series—a fictional universe wherein the storyworld is just as vital to the text as its plot and human characters. The importance of place is directly tied to utopia and the series’ depiction of extrapolated contemporary governmental and sociopolitical systems. “Utopia,” as a conceptual framework, famously dates to Thomas More’s eponymous Utopia (1516), wherein he defined the term based on its Greek word-origins as “no-
place” or “nowhere,” because the fictional society he imagined could not exist—it was too perfect for the real world. More also pointed out the similarity of “utopia” and “eutopia,” which are pronounced identically, and the latter of which means “good-place” and has come to better embody the spirit of utopia in practice. In Utopianism, Lyman Tower Sargent notes: “All utopias ask questions […] Most utopias compare life in the present and life in the utopia and point out what is wrong with the way we live now, thus suggesting what needs to be done to improve things” (5). Moreover, Sargent asserts, utopias come in all the colors of the rainbow: “There are socialist, capitalist, monarchical, democratic, anarchist, ecological, feminist, patriarchal, egalitarian, hierarchical, racist, left-wing, right-wing, reformist, free love, nuclear family, extended family, gay, lesbian, and many more utopias” (21). The Expanse offers a smorgasbord of aspirational-yet-faltering utopias simultaneously in the political and socioeconomic systems of the UN, MCR, and OPA. While not explicitly utopian, however, the gritty realpolitik that imbues the series also perhaps suggests that the dream of utopia is itself naïve. By casting a light on contemporary racial, gender, social, political, and economic issues—all of which are tied to environment and place in Corey’s texts—through the extrapolated possibilities and failures of life under the liberal UN, conservative MCR, or politically fragmented OPA, the novels offer failed utopias based on humankind’s contemporary reality as a warning and admonition. As Jameson notes in his landmark study Archaeologies of the Future: “at best Utopia can serve the negative purpose of making us more aware of our mental and ideological imprisonment […] therefore the best Utopias are those that fail the most comprehensively” (xiii).
Whereas the failures of the UN, MCR, and OPA are tethered to futures based on reality today, the allegorical exoplanets offer a gesture towards environmental and social justice tied to multiculturalism and diversity in all things, and discussed more fully in the next chapter. Taken together, *The Expanse* indicates—through a popular multimedia franchise with a diverse, global fanbase—that whereas a pristine and idyllic utopia may be impossible, misguided, or at best short-lived, a multicultural and vibrant heterotopia offers a realistic, alternative goal worth pursuing.

As in Watney's potatoes in *The Martian*, an examination of food and food production in Corey's storyworld informs an environmental message similarly tied to place and setting, but on a far larger, varied, and more dramatic scale than Watney's monoculture within the strict confines of the Hab. An interesting bit of intertextuality also occurs between the two texts, gesturing perhaps not to similar themes, but at least similar levels of popularity. Corey sets *The Expanse* in what may be a shared universe, or at the very least an awareness of *The Martian: Babylon’s Ashes* (2016) references a Martian ship named *Mark Watney* (152). Like Weir's novel, *The Expanse* uses food issues as background elements within its larger narrative—but in the universe of *The Expanse* there are far more than potatoes and NASA-provided rations. On Earth, "basic" envisions contemporary social welfare systems as well as one possible iteration of a potential Universal Basic Income (UBI) into the future. On the other hand, the humans living throughout the Belt live in “food deserts” projected forward from their present-day equivalents and subsist on cheap fodder known colloquially as “kibble.” Mars—a society preoccupied with transforming the environment and climate of an entire planet—exists somewhere in
the in-between, not yet a new Earth, but far more developed than the Belt. The novella *Gods of Risk* (2012) hints at the problems associated with Martian society, the larger terraforming project, and the hubris of trying to construct a utopia that eventually collapses; the site for an important philosophical discussion in the text is a restaurant, thereby also connecting it to recurring food issues. Despite their differences, however, the Belt and Mars share something important in common—they are not Earth. Instead, both are artificial, human-constructed places. This salience and its importance to an ecocritical analysis of *The Expanse* comes into focus upon closer examination of the series’ settings and plot.

Throughout Corey’s texts, artificial human and environmental systems, like Mars and the Belt, though impressive in their technological prowess, nevertheless prove fragile, à la the “normal accidents” of Charles Perrow: “high-risk technologies” like “nuclear power plants, chemical plants, aircraft and air traffic control, ships, dams, nuclear weapons, space missions, and genetic engineering” that “have catastrophic potential” (3). In *The Expanse*, the high-risk technologies and the artificial ecosystems they support represent risks and destructive potential orders of magnitude more powerful and disruptive than those touted by Perrow in his 1984 book—fusion power, space travel, body modification, geoengineering—yet are similarly prone to catastrophic failure. *The Expanse*’s varied settings offer a direct comparison between artificial, human constructed places like the domes of Mars and Ganymede and the stations of the Belt against Earth itself. Although Earth, Mars, and the Belt all fail in some way the importance of Earth and its biosphere as humankind’s home remains; Earth is the most likely to be redeemed as humanity’s
best hope for a bright future, rather than the red wastes of Mars or the barren void of the Belt.

I argue that the appearance of the protomolecule—initially and importantly in the form of a plague on Eros Station—and humanity's response to the arrival of this alien organism reveal *The Expanse*'s commentary on the inherent fragility of technological infrastructure and artificial systems at a time when humanity's faith in high-tech solutions and cosmic escapism appear to be at an apogee. In *Tiamat's Wrath* (2019), exobiologist Elvi Okoye muses:

The universe wasn't just stranger than you knew, it was stranger than you could know. Every new wonder, no matter how astonishing, just laid the foundation for an even more astounding discovery later. The universe and its constantly shifting definition of what was considered strange. The discovery of what everyone thought was alien life when the protomolecule was found on Phoebe had shaken people to their foundations, and was somehow still less disturbing than the discovery that the protomolecule wasn't an alien so much as it was an alien's tool. Their version of a wrench, only a wrench that converted the entire asteroid station of Eros into a spaceship, hijacked Venus, created the ring gate, and gave sudden access to thirteen hundred worlds beyond. (11–12)\textsuperscript{64}

\textsuperscript{64} Elvi's thoughts here paraphrase the famous quotation of British scientist J.B.S. Haldane in his 1927 text *Possible Worlds and Other Essays*: "My own suspicion is that the universe is not only queerer than we suppose, but queerer than we can suppose."
The protomolecule serves as not only a metaphor for runaway technology or an accidentally introduced invasive species (or some quasi-hybrid of the two), but also what Nassim Nicholas Taleb coins a “Black Swan”: events that are exceedingly rare, carry an extreme impact, and are rationalized only after the fact through hindsight (xxi). The ultimate Black Swan—the appearance of alien life (or its Swiss Army knife-like versatile tool)—disrupts human civilization in the storyworld of *The Expanse*. How different places, characters, and events respond to the Black Swan of the protomolecule’s appearance informs an environmental assessment of Corey’s sf text. As in the counterintuitive aspects of *The Martian* and paradoxical elements of *Avatar* and *Interstellar*, an analysis of *The Expanse* likewise offers unexpected surprises. Corey counters cosmic escapism with a plea to protect humankind’s home planet; an exodus—like that at the core of *The Expanse*—is not the answer to our human and environmental woes. If humankind aims to build a utopia (or heterotopia), the best place to try is the one beneath our feet.

**Basic: Surviving on Earth**

In Corey’s imagined universe the problems associated with survival on an overpopulated, warming Earth and in outer space saturate the series’ narrative. Corey’s imperfect Earth serves as a harbinger of things to come extrapolated from current trends: climate change and other environmental crises, coupled with severe overpopulation, has brought Earth’s biosphere to the brink of collapse; meanwhile, the centralized UN bureaucracy and calcified political and economic systems have
created a stratified populace, half of which is dependent on government support. Although many present-day racist, sexist, and other hatreds and phobias have largely (but not totally) disappeared in Corey’s future, others have risen in their place. The damaged and degrading Earth present in Corey’s narrative, as well as continuing social and economic problems on the planet, inspires humanity’s flight to the stars in search of more room and new resources. On Earth and beyond, agriculture and food are directly connected to the concept of place—in the same way brie and baguettes call to mind France or sushi and saké Japan, so too are the foods of The Expanse’s varied locales tied to place, be they more nutritious, healthful foods on Earth or more artificial and synthesized products in the Belt. The Expanse extrapolates these economic and food issues, under the shadow of climate change, into one possible future if current environmental and sociopolitical trends continue, while also commenting on the resilience and bounty of humankind’s planet home. At the same time, Earth represents a failed liberal utopia—recycling is omnipresent, green technologies like solar panels and fusion power abound, bigotries have largely vanished (except for prejudices based on “environments of origin”), and the entire planet has access to food, shelter, and medical care through basic—but the novels nevertheless reveal deeper problems and unsettling disillusionment tied to the UN’s governance and Earth’s environmental decay.

Although The Expanse confronts such pressing present-day issues as climate change, nuclear proliferation, and the deterioration of Earth’s biosphere, the everyday issues of food access and food injustice lurk in the storyworld’s background. Eric C. Otto provides a conceptual framework for considering the
relevance of food concerns in sf in his essay “The Rain Feels New,” on the works of Paolo Bacigalupi, best known for his 2009 biopunk novel *The Windup Girl*. Otto demonstrates Bacigalupi’s critique of the privatization of food through genetic engineering and reveals how his works represent a critique of present-day food sovereignty and food access issues: “Bacigalupi’s fiction calls us to pursue modes of thinking and social being that would prevent, for example, the unjust privatization of ‘a privilege that nature once provided willingly’—the automatic reproduction of plant life” (182). As Otto demonstrates, sf narratives can effectively comment on contemporary environmental concerns through surrounding agriculture and food issues. *The Expanse* extrapolates contemporary food issues (and their current trends) into a complex, imagined future that features a prevalence of food in a multiplicity of forms. Like Watney’s potatoes in *The Martian*, or corn agriculture and the blight in *Interstellar*, food is central to not only the series’ plot, but its characters, places, and environmental messaging. James Holden constantly pines for good coffee, Naomi Nagata is nostalgic for kibble, Chrisjen Avasarala frequently munches on pistachios, and good scotch—Lagavulin from Scotland—is a sign of sophistication (Corey, *Abaddon’s Gate* 14). In Chapter 1, I offer an ecocritical reading of Andy Weir’s *The Martian* as a microcosmic recreation of, in part, agrilogistics and global warming. *The Expanse*, on the other hand, provides not a microcosmic look at these environmental concerns, but, appropriately, an expansion—instead of the small scale of Watney’s Hab, Corey’s space epic extrapolates environmental concerns to not only a future Earth, but a hypothetical colonized Mars and the space
beyond on a truly cosmic scale. As environmental critic Lawrence Buell opines: “No genre potentially matches up with a planetary level of thinking ‘environment’ better than science fiction does” (57). The Expanse realizes such concerns in its narrative, wherein the UN struggles to support its thirty billion citizens on a climatically changing Earth with a severely stressed biosphere, leading to general malaise, economic uncertainty, and staggering unemployment.

No book in The Expanse offers a more detailed depiction of Earth than Amos Burton’s return to the planet in Nemesis Games (2015). The novel telegraphs to the reader its intent to magnify Earth and the UN’s problems through the eyes of Amos during his trip around North America, almost two decades after his departure from Baltimore to live in the Belt:

The hills and craters of the lunar surface stretched off in all directions, but it was the blue-and-green half-circle hanging in the sky that drew the most attention. It was beautiful at this distance. The cities nothing but firefly twinkles on the dark side. Where the sun struck the Earth, almost nothing man had made was visible from lunar orbit. The planet looked clean, unspoiled.

It was a pretty lie.

Seemed like a fact of the universe that the closer you got to anything, the worse it looked. Take the most beautiful person in the solar system, zoom

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Timothy Morton would likely concur that at nine novels and nine novellas and short stories (collected in the anthology Memory’s Legion) totaling over 5500 pages, and six TV seasons comprising sixty-two episodes, Corey’s series is perhaps a hyperobject of its own.
in on them at the right magnification and they were an apocalyptic cratered
landscape crawling with horrors. That’s what the Earth was. A shining jewel
from space, up close a blasted landscape covered with mites living by
devouring the dying.

“One ticket to New York,” he said to the automated kiosk. (74)

Amos’s thoughts on Earth in the narrative reflect the text’s own estimation of the
planet’s troubles. Just as Amos at first sees Earth from a distance as beautiful, before
revealing the deeper problems and horrors, so too do the novels expose the planet
as a utopian failure. At a distance, the UN’s ability to provide the necessities of life to
its citizenry appears like a true utopia—an entire planet free from need and want,
with food, clothing, shelter, and medical care provided to all; on closer inspection,
however, the intrinsic problems and rot within the system of basic become manifest.
Interestingly, as much as Amos resents Earth, the novels also reveal that he is drawn
towards it. He makes planetfall:

Everything visible on the descent was clean and technologically sleek.

That was a lie too.

By the time the shuttle landed he was ready to get into the grunge of
the city if only to see something that was honest about itself. When he stood
in the full gravity of Earth to walk off the shuttle, he wanted it to feel wrong,
oppressive after all his years away. But the truth was that something deep in
him, maybe down at the genetic level, rejoiced. His ancestors had spent a few
billion years building all their internal structures around the constant of one g downward pull, and his organism breathed a sigh of relief at the amazing *rightness* of it. (75)

Amos’s thoughts here reveal deeper truths about both *The Expanse* and humankind as a whole. Despite the planet’s problems which Amos knows and encounters, Earth remains humanity’s birthplace and home. Amos—despite his reluctance to return to Earth—is nevertheless drawn to the planet. The “amazing *rightness*” of it is coded into Amos’s DNA, literally. The billions of years life on Earth spent evolving into its incredibly complex biosphere, the planet’s gravity, its diurnal-nocturnal cycles, humanity’s Circadian rhythm, are all part of Amos’s biology. The text implies that no other world will ever be as *right* for humankind as Earth. Susan M. Bernardo calls this connection to Earth “terraphilia,” which she defines as “a sense of a deep bond with and loyalty to the Earth—that is necessary for anyone to attempt to move forward and remain on a wrecked planet” (“Terraphilia” 155). While Corey depicts the UN as an idealistic, overburdened failure, it remains the best place to try to build a brighter future.

After landing in New York, Amos travels first to Philadelphia and then to his native Baltimore, providing a detailed, on-the-ground depiction and assessment of the lives of fifteen billion Earthers (half the planet’s population) completely dependent on basic for all their needs:
At the short, tunnel-like exit he was accosted by a boy of eleven or twelve wearing a cheap paper jumpsuit, the kind that basic kiosks dispensed for free with a thumbprint. The boy offered him a variety of sexual services at rock-bottom prices. Amos grabbed the boy by the chin and tilted his face up. There were the fading yellow marks of a not-too-recent beating on his cheek, and the telltale pink around the eyelids of a pixie dust habit. [...] 

He had the cab let him out at a corner coffee stand that was licensed to accept basic ration cards. It was in the exact same location as the last place he’d ever eaten in Baltimore before he left. The cart and the franchise brand were different, but the assortment of rolls and muffins looked identical. 

“Tall cup and a corn muffin,” he said to the girl working the cart. She looked so surprised when his terminal transferred actual money instead of basic ration credits that she almost dropped his food. [...] 

The muffin tasted like it had been recycled from old, previously eaten corn muffins. And the coffee could have passed for a petroleum product, but he leaned against a wall and took his time finishing both. He tossed what was left into recycling and thanked the girl. She didn’t reply. His space money and foreign clothes left her staring at him like some sort of alien creature. Which, he supposed, he sort of was. (103–104, 108–109) 

People surviving on basic in Corey’s universe do not live a glamorous life. They subsist on cheap foods and other necessities provided by Earth’s government and live a forgotten, liminal existence. When wandering the streets of Philadelphia and
Baltimore, Amos encounters an impoverished population almost totally reliant on basic support. The coffee cart he visits is licensed to accept basic and as a result carries only low-quality foodstuffs of questionable nutritional value. Basic provides its recipients with the cheap food, clothing, housing, and medical care that they need to continue breathing, but nothing else. Drugs, prostitution, and exploitive relationships cling to the recipients of basic like a cheap paper jumpsuit. Humans living on basic survive, but they do not thrive.

Whereas Amos provides an insider’s view of basic, *The Expanse* also offers an outsider’s perspective of the UN’s socioeconomic system. Bobbie Draper, a Martian Marine, serves as a synecdoche for Mars and a conservative critique of the UN’s economics when she visits Earth for a military conference in *Caliban’s War* (2012). She provides a view of Earther life wandering the streets of The Hague near the UN’s seat of government, when she muses:

> And if Martian propaganda was right, most of the people she could see right now didn’t have jobs. She tried to imagine that, not having any particular place you had to be on any given day.

> What the Earthers had discovered is that when people have nothing else to do, they have babies. For a brief period in the twentieth and twenty-first centuries, the population looked like it might shrink rather than continue to grow. As more and more women went into higher education, and from there to jobs, the average family size grew smaller.

> A few decades of massive employment shrinkage ended that.
Or, again, that was what she’d been taught in school. Only here on Earth, where food grew on its own, where air was just a by-product of random untended plants, where resources lay thick on the ground, could a person choose not to do anything at all. There was enough extra created by those who felt the need to work that the surplus could feed the rest. A world no longer of the haves and have-nots, but of the engaged and apathetic. (163–164)

Bobbie’s assessment of Earth’s economy, as she notes, is based on Martian propaganda and is consequently flawed. Interestingly, however, while the text seems to offer a critical assessment of Earther malaise through Bobbie’s eyes (from a conservative economic standpoint at least), a counternarrative flows like an undercurrent beneath the surface. The UN’s policies may be flawed, and the planet may be degraded, but Earth nevertheless remains the perfect home for humankind—our species evolved on this planet for a reason, after all—that even in its poorly governed, battered, overpopulated, polluted, resource-depleted, environmentally compromised state, the planet can still support an incredible amount of human and other life, even when half of those humans do nothing to contribute to their own survival. Bobbie engages the young barista Blue in conversation to find out an Earther’s perspective on the UN’s economics, leading to a different appreciation of the system:
Bobbie wondered if Mars would become like this after the terraforming. If Martians didn’t have to fight every day to make enough resources to survive, would they turn into this? A culture where you could actually *choose* if you wanted to contribute? The work hours and collective intelligence of fifteen billion humans just tossed away as acceptable losses for the system. It made Bobbie sad to think of. All that effort to get to a point where they could live like this. Sending their kids to work at a coffee shop to see if they were up to contributing. Letting them live the rest of their lives on basic if they weren’t. (164)

In Corey’s universe Earth possesses a massive unemployment problem linked to its dire overpopulation and destabilized ecosystem, but the line between basic and wealth is not as simple as Bobbie outlines. Many humans on Earth are forced to rely on basic because there are simply not enough jobs. Even if one wants to work, there are no positions that need to be filled. Blue wants to attend university, but with a shortage of available seats and too many interested applicants, she must work a year in a café to prove her motivation to become a student. Despite all these issues, however, Earth remains resilient. Furthermore, any critique of Earth’s economics

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66 The Martian propaganda instilled in Bobbie reflects the view that many Earthers live on basic rather than work because they are lazy and unwilling to contribute to society. This reflects a common, conservative assessment of contemporary social welfare programs, where critics argue that the racial minorities that disproportionately rely on such programs do so due to apathy and lethargy. Indeed, contemporary American politics, for example, is saturated with racial resentment and cultural anxiety that often appears in debates surrounding a variety of public welfare programs: “This characterization of poor people as lazy drug abusers is often cast in the narrative of Democrats representing urban areas with large minority populations fighting Republicans from predominantly white regions” (Granderson). Both the Martian view of Earthers and the depiction of racial minorities today rely on racist stereotypes based more on fear of the Other than actual fact.
seems rooted in capitalism and the value of labor—but if work becomes impossible, is simply living no longer enough? The Martian critique of Earth is derived in part from Mars’s full employment:

On Mars, it was a generally accepted fact that Earth was a civilization in decay. Lazy, coddled citizens who lived on the government dole. Fat, corrupt politicians who enriched themselves at the expense of the colonies. A degrading infrastructure that spent close to 30 percent of its total output on recycling systems to keep the population from drowning in its own filth. On Mars, there was virtually no unemployment. The entire population was engaged either directly or indirectly in the greatest engineering feat in human history: the terraforming of a planet. It gave everyone a sense of purpose, a shared vision of the future. Nothing like the Earthers, who lived only for their next government payout and their next visit to the drugstore or entertainment malls. (160)

Bobbie’s musings are directly linked to a comprehensive understanding of setting and place—on her first trip to Earth, she meanders around The Hague. After suffering a brief bout of agoraphobia (a wide-open sky, rather than a dome, is unnerving for a Martian) Bobbie wanders the city, observing both Earth’s natural environment as well as the UN’s constructed economic, social, and political institutions. As Bobbie’s predetermined view of Earther life begins to fall apart, so does an initial assessment of The Expanse as a critique of the UN’s liberal policies.
Martians struggle to survive every day, working for generations to transform an entire planet in a project that may never (and indeed does not) come to fruition. In the meantime, some people on Earth feel the need to work, others do not, and some cannot, but they can all live. There are, of course, massive problems on Earth, but no one goes hungry, no one lacks housing, no one cannot afford clothing, no one is turned away from medical care. Earth’s abundance and the UN’s basic support system provide. In its portrayal of Earth as an idealistic-yet-failed utopia, *The Expanse* warns against certain paths: basic, in the form envisioned by the UN, has serious structural problems and can be improved upon; wealth disparity remains a major problem; and, perhaps most importantly, allowing climate change to run rampant and the planet’s ecosystem to degrade has severe long-term negative consequences. This concept, known as the “future anterior,” or in other words, what humankind does now in our present predestines “what will have been” centuries from now. The future anterior serves as a mirror opposite of the alternative history in sf. Whereas other sf works like Dan Simmons’s *The Terror* (2007) use alternative history to presage the effect of climate change on the thawing poles from a past point-of-view, the future anterior in the extrapolated future of *The Expanse* instead imagines a storyworld where human actions in the present-day might lead in the future, and how decisions made in our own time impact the humans of that future. Rather than how Simmons used alternate history to move forward in time to our present, Corey extrapolates our reality into the future, leaving whatever irrevocable choices made in our present “baked in” to *The Expanse’s* future timeline. Our actions on Earth today determine the overpopulation, environmental degradation, and
The socioeconomic systems experienced by Corey’s future humans. The first step towards building a better home on Earth, Corey suggests, is giving future generations a clean, vibrant, livable world, by amending our actions in the present.

On its surface, *The Expanse* appears to portray basic as both a troubling and unworkable social ill, despite its good intentions. Scott Santens, editor of *Basic Income Today*, a political advocacy magazine, notes: “*The Expanse* depicts a dystopian future where humanity chooses to construct a ceiling over half the population of Earth [...] It is only through visualizing different versions of the future, that we can decide which ones we’d rather avoid, and which we’d rather pursue” (Santens). Basic is a specific political and economic policy—by depicting its problems, Corey leads the reader to consider better, more workable alternatives.

The dream of a progressive future Earth, free from need and want, is behind the planned liberal utopia of the UN. But the fantasy falters and fails. Amos witnesses rampant poverty and crime wandering the slums and failed arcologies “at the drowned edges of Baltimore,” connecting both the flooding associated with climate change with not only ecological devastation but also its human societal costs (Corey, *The Churn* Kindle Edition location 17). Earth may be humanity’s ideal home, but Corey’s envisioned Earth is far from idyllic. The novels reveal deep problems tied to the UN’s policies, serving as a warning for paths to avoid and pitfalls to circumnavigate. Santens asserts:

*The Expanse’s* basic is bad policy, but also an entirely realistic policy based on existing misconceptions [...] Instead of lifting everyone above the poverty
line and giving people the freedom to pursue anything they wish to pursue, paid or unpaid, work or leisure, with a universal cash floor sufficient for securing basic needs as a monthly starting point, humanity instead forces people to choose between earning income and existing in a way approved by the government. (Santens)

Although Santens, an advocate for UBI, critiques the UN’s basic policy from the left, it is possible to see a conservative economic critique (like Bobbie’s) of the UN as well. In The Expanse, Mars represents a conservative antipode to Earth’s liberalism. Martian policy believes that humans should be productive (after all, how else can one terraform an entire planet?); views of Earth from Mars therefore offer a critique of basic and the UN generally from the right. Interestingly, while at first Corey’s portrayal of basic appears to critique the social welfare state, a more thorough analysis shows that the potential message is more complicated. Corey’s UN, it seems, is in fact a warning about specific policies and misconceptions, not a harbinger of the failure of liberal economics in general. This makes sense when one considers the Marxist critique that also runs beneath the surface of The Expanse:

Mars, Earth, and the [Belt] differ not just in terms of how they produce or who they produce for, but also in terms of what they produce from. Earth is post-scarcity because the basic conditions of survival are given rather than produced. [Mars] is defined by a collective project to make a planet livable, a project and a telos, while the [B]elt is defined by an absolutely hostile life
against a harsh vacuum. *The Expanse* is a depiction of the mode of production fitting for the [A]nthropocene in which nature and culture are thoroughly intertwined. (Read)

Here, economic philosopher Jason Read notes the environmental and Marxist undercurrents that run beneath the UN’s, MCR’s, and OPA’s socioeconomic systems. He posits the present-day resonances from Corey’s extrapolated future—revealing how contemporary trends, carried into the future, develop into the different settings of *The Expanse*. However, although wealth disparity and a critique of basic appear regularly throughout Corey’s universe, they are tied to pervasive environmental and technological issues that Marx did not foresee. Although Earth is ecologically imperiled, technology has reached a point that some iteration of UBI like the UN’s basic support has become not only possible, but necessary. As former 2020 Democratic Party Presidential Candidate and UBI booster Andrew Yang posits, “we are already in the midst of the fourth industrial revolution—and it is already wreaking havoc on communities […] AI and automation have the potential to make our lives easier, but they will also displace millions of […] jobs and have been doing so for years” (Yang). Corey’s Earth is one that has witnessed several centuries of technological and economic development (and ecological degradation) beyond our present reality. The fears expressed by economist Martin Ford in *Rise of the Robots* have come to pass. Increased automation fundamentally alters Earth’s economics: “That shift will ultimately challenge one of our most basic assumptions about technology: that *machines are tools* that increase productivity of workers. Instead,
machines themselves are turning into workers, and the line between capability of labor and capital is blurring as never before” (xii). In Corey's future, technology has reached a point that half of Earth's population cannot work because there is simply nothing for them to do. Despite this, they can live. Earth supports them and everyone and everything else. Here, *The Expanse* seems to offer a critical elixir to the technophilia potion of *The Martian*—the spell is broken, humankind cannot technofix its way out of everything, as the technology itself has unforeseen consequences of its own.

Corey's complex and oftentimes conflicting portrayal of basic contributes to an appreciation of *The Expanse*—like the real world, Corey's storyworld is sometimes complicated and contradictory. Basic is not a panacea but neither is it a poison, it is the system the UN chose, and despite its deep-seated problems it provides necessities for fifteen billion humans on an environmentally compromised planet. Through the lens of basic, Corey’s UN-governed Earth comes into focus as a failed liberal state. Its failures and problems act as warnings for our contemporary reality. The UN's pervasive system of basic is not the only option available—it is a bad policy, but not the only choice, meaning other paths forward could lead to more favorable outcomes. Furthermore, in the centralized UN, basic is omnipresent everywhere—because all humans on Earth are part of the same bureaucracy, there are no competing systems or experimentation; the calcified and stratified hierarchy may provide for everyone on the planet, but with no competition of ideas or systems.

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67 During his sojourn on Earth, Amos spies a sparrow, noting: “Easy to forget that even with the massive burden of humanity, there was still wildlife on Earth” (Corey, *Nemesis Games* 318).
they remain blind to possible alternatives. Finally, Earth’s ills—including basic—are
tied to environmental distress and climate change. The ecological degradation of the
planet forecloses the options available on Corey’s future Earth; different political,
social, economic, and environmental choices today have the potential to greatly
affect humankind’s future. In The Expanse, Earth is no utopia, no Shangri-La or
Xanadu, but it (and our own Earth) can be improved, Corey suggests, if only
humanity could make better choices.

*Gods of Risk: Martian Criticism*

Aside from Earth, the other main axis of human civilization in *The Expanse* is
the work-in-progress, partially terraformed Mars—the Belt and outer planets,
though immense and a key setting throughout the saga, remain a sparsely populated
hinterland. Whereas basic embodies the liberal utopian dream of a future free from
need and want, the Martian terraforming project envisions a conservative
“humanity versus nature” paradigm through a “conquest of the land” narrative.
Chris Pak, in his critical study *Terraforming*, declares: “Sf, as the example of
terraforming illustrates, is a mode that allows us to explore the status and the
consequences of various forms of relationship with space […] and evaluate our
historical relationship to our home planet and to postulate alternatives to current
practices” (7). The positioning of Earth and Mars in Corey’s texts serves as a rough
parallel between Europe and the Americas, respectively, in human history, with
humankind repeating its past and present mistakes into the future. In the eyes of
many in *The Expanse*'s storyworld, the “Old World” of Earth has become a land infused with decadence, pollution, and lack of opportunity. On the other hand, the “New World” of Mars is relatively free from such problems, but as a developing frontier it instead requires humans to work their utmost to “tame the land” in a way that parallels the spirit and mythology of North America's West or Australia’s Outback. Although Mars lacks the Indigenous populations crushed by imperialist ambitions and genocides of such historical frontiers, the Martian settlement paradigm is nevertheless imbued with the troubling history of colonialism. Philip Smith, discussing the history of Mars in literature, explains: "The absence of native life on Mars—be it human, animal, or plant—similarly presents an imaginary form of victimless colonialism typical of Martian fiction" (334). That historically such places already had native populations and that the "settling of the frontier" was in many ways analogous to wreaking genocidal violence against Indigenous peoples and incredible environmental damage hangs over the analogy, and is even recast in some older examples of Martian fiction before the planet was known to be lifeless.

Mars has long offered a space that serves as both a parallel and an alternative to human history, especially the concepts of colonization and the settling of a frontier. Corey’s Mars is no exception—the MCR serves as an extrapolated conservative counterpart to the liberal UN. In *The Expanse*, Corey builds on literary antecedents that also imagined Mars as an alternative space. Smith notes:

Mars has historically served as an extension of European expansionism [...] Novels such as Gustavus Pope's *A Journey to Mars* (1894), Ellsworth
Douglass’s *Pharaoh’s Broker* (1899), George Griffith’s *A Honeymoon in Space* (1901) and, most famously, Edgar Rice Burrough’s *A Princess of Mars* (1912) all imagine Mars as a mythic version of the land beyond the frontier, peopled by savage natives, hostile animals, an inhospitable landscape, and “sexually available” native women. (329)

Here, Smith discusses how the literary Mars often serves as an “extension”—a repeat or extrapolation—of the history of colonialism. Although Smith’s version of a frontier Mars works well for examining texts like *The Martian*, it holds less so for other iterations of Mars like those in *The Expanse*, where the settling of the Red Planet has been underway for centuries when the narrative begins. Whereas the Mars of *The Martian* might serve as an analogue for the Americas in the 1500s when the first European explorers delineated and marauded the continents, the Mars of *The Expanse* is more akin to the Americas of the 1800s—indeed, (or moving in that direction), developed (but not fully so), and teeming (or at least gilded) with newfound promise when compared to the still more powerful, but troubled Europe. One potential reading of *The Martian*, moreover, suggests “that humanity can outlast Earth by, as Watney does, using technology and ingenuity to render the Red Planet fit for sustaining life” (Smith 331). The fate of Mars in Corey’s texts, meanwhile, points in an opposite direction, and therefore serves as a critique of the Mars-inspired cosmic escapism proffered by contemporary visionaries and space enthusiasts of the twenty-first century. Despite a massive human endeavor and an
assemblage of high-tech equipment and machinery, the MCR’s terraforming project flounders and founders.

Mars in fiction generally takes on two larger forms and motifs, both interconnected—not only the frontier, but the utopia. In *Imagining Mars*, Robert Crossley notes the connection between the two concepts: “By the later nineteenth century, cartographers had little room left on their maps of Earth for the hidden valleys, lost kingdoms, and uncharted islands that were the favored locations for Utopia [...] as terrestrial sites for Utopia became harder to portray convincingly, writers turned increasingly to a Martian locale” (90). This shifting yet overlapping portrayal of Mars as a frontier/utopia runs the gamut of Mars in fiction, from H.G. Wells’s “The Crystal Egg” (1897) and Edgar Rice Burroughs’s *A Princess of Mars* (1912) through Ray Bradbury’s *The Martian Chronicles* (1950) and finally to more contemporary works like Kim Stanley Robinson’s *Mars* trilogy (1992–1996) and even Weir’s *The Martian* (2011), and the myriad texts and films in between over the course of the last century and a half. In *The Expanse*, Mars views itself as both a developing frontier and potential utopia, but this positioning ultimately collapses as the MCR crumbles.

In Corey’s series, the Red Planet offers the promise of one day being constructed into an alternative utopia, like that outlined by Robinson in his *Mars* trilogy.68 Given the similarities and resonances manifest between *The Expanse* and

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68 *The Expanse* makes several indirect references to Robinson’s trilogy. The Japanese phrase “shikata ga nai,” meaning “it cannot be helped” or “nothing can be done about it,” is a popular phrase of the enigmatic Hiroko Ai in the *Mars* novels. This phrase is frequently used by Belters in *The Expanse* as part of their polyglot pidgin language.
Robinson’s Mars trilogy, it is fruitful to put them in conversation with each other. In Robinson’s trilogy, the settling and terraforming of Mars takes places over three novels: Red Mars (1992), Green Mars (1993), and Blue Mars (1996). The colors obviously refer to the physically changing state of Mars: “The shifting adjectives of the titles then correspond to stages in the development of the planet itself—first reddish rock, then covered by green plant life, and finally bathed in water and wrapped definitively in the great Martian oceans” (Jameson, “Realism and Utopia” 51). The Mars trilogy provides a framework for examining the terraforming of Mars as a metaphor for the construction of a utopia—both an actual, extrapolated, constructed one on Mars, as well as a more allegorical, theoretical one juxtaposed against the problems of Earth. As the settlers of Robinson’s trilogy terraform Mars over the span of the lengthy story arc, they also establish a rather idyllic (though still imperfect) counterpoint to Earth: “Terraforming literalises metaphors for the creation of discursive spaces to explore new forms of local and global connectedness and identity that stand as alternatives to destructive social formations on Earth” (Pak 183). Robinson’s trilogy at least hints that this utopia is possible—the terraforming of Mars over the course of the three novels is largely successful, despite setbacks and warfare and social strife from time to time, and by the conclusion of Blue Mars the planet is terraformed for human life, teeming with oceans and its own genetically engineered biosphere, and independent government and constitution. Although the Martian settlers of the trilogy never manage to cut themselves off from Earth completely—there is no impenetrable trench as in More’s
original *Utopia*, for example—they still manage to establish a largely idyllic
counterpoint to the troubles of Earth.

The Mars of *The Expanse* exists midway between the barren world of *The Martian* and the fully terraformed planet at the conclusion of the *Mars* trilogy—it is no longer an open frontier, but neither is it a utopia. Instead, Mars serves as a sort of middle ground between the extremes of Earth and the Belt: physically, gravitationally, agriculturally, culturally, et cetera. Although Martian characters like Bobbie Draper and the *Rocinante*’s pilot Alex Kamal serve as major point-of-view characters throughout the series, Mars itself hangs largely in the background. Earth, the Belt, and later the new exoplanets accessed through the ring gate appear in far more detail and depth than Mars at any point in the narrative. Although the series occasionally visits Mars, the only text to focus directly on the planet is the *bildungsroman* novella *Gods of Risk* (2012), set immediately after the events of the second novel and following Bobbie’s return to Mars and her interactions with her family there. The novella tracks Bobbie’s nephew David’s coming-of-age story, as he prepares for university and becomes involved in the Martian criminal underworld. In the background, *Gods of Risk* maps out the physical and social cartography of life on Mars. In *The Expanse*, Martians live in domed and largely underground cities connected by sprawling transit networks:

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69 Although the main nine novels of *The Expanse* are all physically published by Orbit Books, the numerous novellas and short stories penned by Corey appear solely in digital form.
Seven communities—called the neighborhoods—scattered through the northern reach of the Aururae Sinus made up Londres Nova. The city, such as it was, had burrowed deep into the flesh of Mars, using the soil as insulation and radiation shielding with only ten domes pressing out to the surface. Forty thousand people lived and worked there, carving new life into the unforgiving stone of humanity’s second home. Tube stations made a simple web topology that determined the social forms and structures. (Corey, *Gods of Risk* Kindle Edition location 54)

Here, aside from describing typical Martian life, Corey’s text also gestures to the unnaturalness of the human presence on the Red Planet. The humans have “burrowed” into the “flesh” of Mars, like a tick or other parasite. The novella continues this motif later, when the transit and utility systems are described in more detail: “The wide access corridors passed slowly, the conduits and pipes like the circulatory system of some vast planetary behemoth” (Kindle Edition location 174). *Gods of Risk* presents something of a contradiction—the human settlers are invasive, but they are also the ones “giving life” to the otherwise dead Martian rock. The text, therefore, seems to make no clear philosophical statement on the “rightness” of terraforming Mars, like the argument and conflict seen between the Reds and Greens of Robinson’s trilogy. Instead, while the question of terraforming Mars is left philosophically open, the novella later directly positions it as an impractical proposition, and one that is certainly no acceptable alternative to the preservation and conservation of Earth.
After David is accepted to the development (terraforming) track in university, his family throws him a party at a local restaurant. Bobbie and her father (David’s grandfather) get into an argument:

“You know, back in the ancient days,” Pop-Pop said, gesturing with a glass of whiskey, “they built cathedrals. Massive churches lifted up to the glory of God. Far, far beyond what you’d expect people to manage with just quarry stone and trees and a few steel knives, you know. Just a few simple tools.” […]

“The thing that’s important, though, is the time, you see?” Pop-Pop said. “The time. Raising up one of those cathedrals would take whole generations. The men who drew the plans, who envisioned the final form of the thing? They would be dead long before it was finished. It might be their grandsons or their great-grandsons or their great-great-grandsons who saw the work complete.” […]

“There’s a beauty in that,” Pop-Pop said earnestly to everyone and no one. “Such a massive plan. Such ambition. A man might be setting the final stone and think back to his own father who’d set the stones below him and his grandfather who set the stones below that. To have a place in the great scheme, that was the beauty of it. To be part of something you didn’t begin and you would not see completed. It was beautiful.”

“I love you, Dad,” Aunt Bobbie said, “but that’s bullshit […] I’ve been hearing about the cathedrals since I was a kid, and it’s bullshit. Seriously,
who were they to decide what everyone was going to be doing for the next four generations? It’s not like they asked their however many great-grandkids if they wanted to be stonecutters. Maybe some of them wanted to…be musicians. Hell, be architects and do something of their own. Deciding what everyone’s going to do...what we’re going to be. It’s hubris, isn’t it?”

“We’re not talking about cathedrals anymore, are we, sis?” [said Bobbie’s brother].

“Yeah, because it was a really obscure metaphor,” Aunt Bobbie replied. (Kindle Edition location 548)

In this pivotal scene, Gods of Risk directly compares Mars’s terraforming project to the building of cathedrals. As Bobbie’s closing remark indicates, Corey does not attempt to be coy with the metaphor—it is clear and obvious, both to the reader but also to the characters within the text. Like the generational construction projects of cathedrals on Earth, the terraforming of Mars is a centuries-long process the completion of which remains in the distant future of The Expanse’s narrative. Although the healthcare and lifespan of Corey’s characters is advanced beyond current medical science, The Expanse does not employ the deus ex machina legerdemain of the longevity treatments presented in Robinson’s Mars trilogy. The characters of The Expanse can live long lives, but none can possibly hope to witness the entirety of the terraforming project from inception to conclusion. The terraforming project defines Mars, just as basic does Earth, but at the time of The
Expanse’s narrative it is at best a utopia-in-progress, and one that eventually falters and fails.

As The Expanse progresses, Bobbie’s assessment proves prophetic, but not for the reasons she thinks. The “hubris” of the terraforming project, like Victor Frankenstein’s hubris in the very first sf novel, descends from not respecting the power of nature and assuming a stability and permanence that is unrealistic. The use of the cathedral as a metaphor is particularly (if unintentionally) apt to the long 2010s. As noted in Chapter 1, on April 15, 2019, the renowned Notre-Dame de Paris cathedral burned. Despite taking nearly two centuries to construct (from 1163–1345 CE) and surviving countless wars, revolutions, plagues, protests, and other fires, (not to mention almost 700 years of simply enduring the elements), an errant cigarette or electrical malfunction razed the massive edifice (Leasca). Mars is a technological marvel, but one that is artificial and inherently fragile. In Gods of Risk, protesters depressurize a transit line “to make a point about how vulnerable we are” (Kindle Edition location 347). Like Notre-Dame de Paris and the other cathedrals of Earth, centuries of work and a fully devoted populace must go into making a terraformed Mars a reality, and it is here that The Expanse makes perhaps its largest point concerning artificial versus natural systems and the hubris of engineering a utopia.

In The Expanse, Mars fails. Despite centuries of backbreaking work, technological prowess, and human ingenuity on a planetary scale, the terraforming project grinds to a halt. The arrival of the protomolecule changes everything—like many other world-changing events before it—and kills the dream of Mars. Change,
as the saying goes, is the only constant in the universe. The perturbations and realignments ushered in by the protomolecule makes Mars unsustainable and unnecessary. By opening the ring gate to thirteen hundred habitable worlds with their own biospheres and breathable atmospheres, the protomolecule kills the dream of Mars. However, just as it did not need to be a fire that destroyed much of Notre-Dame (it could have conceivably been either world war, an earthquake, a nuclear strike, a terrorist bombing, or many other things), it is likewise not necessary that the rather improbable arrival of the protomolecule be what ends the Martian project (it could have also been one of the other possibilities hinted at in the novels: war with Earth or the Belt, an asteroid impact [natural or artificial], an engineering mistake, or any of a number of other intentional or accidental actions or events). Visiting Mars, Avasarala explains to Bobbie:

Mars is dead, Bobbie [...] Half the Martian government understands, and they're shitting themselves so hard, they won't have any bones left. Who the fuck's going to stay on Mars? A thousand new worlds where you don't have to live in caves and wear environment suits to walk under the sky. No one's going to be here. Do you know what would happen if half the population of Earth left for the worlds beyond the Ring? [...] We'd knock down some walls and make bigger apartments. That's how many people we have on basic. Do you know what happens to Mars if twenty percent of the population leaves? [...] The terraforming project shuts down. And upkeep on the basic
infrastructure becomes harder. The tax base collapses. The economy craters.

The Martian state fails. (Corey, Cibola Burn 579–580)\(^7\)

Of all the things that could destroy the Martian (and utopian) dream, it is the totally unexpected that does. Here, the series hints at a countercurrent beneath its space opera narrative. While readers of the series—and sf generally—likely read The Expanse to escape the troubles of Earth, Corey implies that to actually do so is foolhardy and counterproductive. Terraforming Mars—itself a dead world—is as hubristic as Frankenstein's own reanimation of the dead. And like the Swiss scientist, attempting to exert the level of control over nature envisioned here, like terraforming an entire planet or engineering a utopia, is doomed to failure. A repeating theme throughout the text is that artificial, human systems, like Mars, are frail and fragile, whereas the strength, resilience, and adaptability of Earth lies in its ancient, living naturalness. The Expanse makes this point doubly clear in the even more inhospitable realm beyond Mars, the vast void of the Belt and outer planets.

**Kibble: Life in the Belt**

Unlike the troubled cornucopia of Earth experienced even by those on basic, or life underground on a partially terraformed Mars, most Belters eke out an

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\(^7\) Chrisjen Avasarala, a point-of-view character introduced in Caliban’s War, is a grandmotherly, foul-mouthed UN politician, who rises through the ranks and catastrophes of The Expanse to eventually become the Secretary-General during Nemesis Games. The juxtaposition of her white hair and brightly colored saris with her dyspeptic temperament and sharp tongue is part of her character’s charm.
existence amid a constant struggle for necessities; they live in poverty on run-down stations, working dangerous and difficult jobs for meager compensation and little social mobility with almost no autonomy or self-government. Belters live on a variety of non-perishable, preserved, and heavily processed foods, the most prevalent of which is kibble, which comes in both red and white varieties and embodies the Belt’s ubiquitous food and environmental concerns. Like Corey’s Earth and Mars, the Belt also serves as a troubled future extrapolation of the world today: Belters are a marginalized, repressed group, and they subsist in the equivalent of contemporary “food deserts,” generally urban areas “where it is difficult or impossible to access affordable, healthy food” (Penniman 152). Although the correlation between the Belt and contemporary food deserts exists, it is imperfect, implying that Belters are not an allegorical representation of present-day oppressed racial groups, but an extrapolative one based on current trends and policies. However, like food deserts today, primarily found in impoverished urban areas (like the cramped stations of the Belt), these same areas tend to be populated by minority groups (like the oppressed Belters), adding a racial dimension to The Expanse’s social commentary. Although racial bigotry based on skin color has mostly disappeared from Corey’s storyworld, discrimination based on “environments of origin” runs rampant, and Belters, as both the poorest and most physiologically distinct, are looked down upon by both Earthers and Martians alike. This turn in the series can be read as both allegorical and extrapolative—the Belters could serve as analogous to marginalized minority groups on Earth today, or, the legacy of racism can be viewed as carrying over in a new, reimagined form into Corey’s extrapolated
future. Through the Belt and Belters, Corey projects the present-day problem of food deserts and oppressed minority groups into a conceivable future if current trends and conditions persist.

Despite the hard life of most Belters, they too dream of self-determination and utopia: “It was hard to make a new, shining city in the void when the people designing it, building it, living in it were dying from want” (Corey, Babylon’s Ashes 314). Cyn, one of Naomi Nagata’s former shipmates, echoes this dream: “Gardens in the vacuum. Cities make Tycho Station look like some rock hopper’s head. New world without a world to it, yeah?” (Corey, Nemesis Games 406). These descriptions of a bright Belter future evoke a variety of utopias: the “city upon a hill,” the memory of Eden, and the promise of the “New World,” but in outer space. At a recurring element of The Expanse focuses on the political struggle of Belters to build a future for themselves. The reality of life in the Belt is vividly described by detective Josephus Miller during an inner monologue:

Living on the surface of a planet, mass sucking at every bone and muscle, and nothing but gravity to keep your air close, seemed like a fast path to crazy [...] Recycled air that had passed through a million lungs. Water from the tap so

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71 At first, the Belt and outer planets may seem like an unlikely place to build a utopia, but it is vital to consider the positionality of readers today. All humans today are Earthers; no humans today can see the Belt as Belters do, and many Belters cannot live anywhere else: “He was the kind of man who would never be able to tolerate living on a planetary surface, even for a short period of time. The most extreme end of the Belter physiological spectrum” (Corey, Babylon’s Ashes 23). Although the Belt may seem dystopian to present-day humans, in the minds of Belters like Naomi, Cyn, and Miller it is a place to be cherished, though certainly an imperfect one. The Belt’s problems largely flow from their political oppression and economic exploitation by Earth and Mars, but later in the series, after freeing themselves from the yoke of the inner planets, Belters are at least able to attain some degree of autonomy and independence.
clean it could be used for lab work, but it had been piss and shit and tears and blood and would be again. The circle of life on Ceres was so small you could see the curve. (Corey, *Leviathan Wakes* 25)

Miller’s thoughts, early in the first novel of the series, illuminate the divergence between humans continuing to live on Earth and those living on the stations of the Belt. Salis, another Belter, echoes Miller’s musings in *Babylon’s Ashes* (2016): “The drum at Medina was the nearest thing he could imagine to sitting on Earth […] unregulated atmosphere above him and the thin crust and mantle holding him above a core of molten stone. No matter how many times he came here, it felt exotic” (46). Miller and Salis cannot imagine life on a planet. Instead, they prefer a sterile, antiseptic, and cramped life on a small, artificial station. What most humans living today would consider claustrophobic and oppressive, to say the least, they consider home. Belters are aware of and combat their oppression, but they do not wish for a return to Earth—instead, they seek to trailblaze their own path forward, a daunting and perhaps unfeasible prospect. The novels seem to portray this pioneering trait as humanity’s adaptability and resourcefulness—in much the same way that humans have come to inhabit nearly the entire surface of Earth, so too can they grow accustomed to life in the Belt, especially if they were born and reared there.

Although the series portrays the Belters and their plight in a sympathetic light, that is not to say the series endorses their overall project of a life totally detached from Earth. Belters and their endeavors, at their core, run totally counter to the evolutionary narrative—the inherent *rightness* of Earth—seen during Amos’s
return to the planet. Rather than endorsing a flight from the planet, the novels instead seem to be commenting on humankind’s inherent ingenuity and resilience in the face of adversity, implying that no matter how damaged our planet and society may appear, there remains hope to avoiding the fate offered by The Expanse. Here, I argue, Corey’s and The Expanse’s persistent optimism comes into focus, even if the novels do not endorse humankind’s flight from Earth for new homes like that envisioned in the Belt. Miller’s reflections also underscore the scarcity of resources Belters live with every day. Everything is recycled. If the circle of life on Ceres is so small that one can “see the curve,” there is little room for error or redundancy. Life in artificial environments is precarious, but for Belters it is home. This seeming contradiction reveals two of The Expanse’s tandem themes: dreaming of an exodus to space is unrealistic, but at the same time humankind is a font of optimism, resourcefulness, resilience, and adaptability. The Expanse boasts an unrelenting optimism for humanity, even in its bleak, troubled future, where the same present-day issues of bigotry, greed, betrayal, corruption, short-sightedness, and every other variety of human failure and frailty continue to exist. Here, The Expanse seems to indicate that many future paths are open to humankind due to our species’ shared traits, but that the one envisioned in the series is but one possibility, and by no means the best option. Humanity staggers onward in Corey’s pages despite all its problems, but the series offers the counternarrative that just because this future is possible, it does not mean it is the one our species should choose. Life on a renewed, vibrant, well-governed Earth (unlike the one in The Expanse), is preferable to a possible but bleak and hard life beyond our homeworld.
When the novels begin, Belters rely almost totally on cheap, non-perishable foodstuffs like kibble and protein paste, but they work to supplement their food sources as the story arc of the series proceeds. As Belters work to gain sovereignty under the auspices of the OPA (and later the Free Navy and the Transport Union), they also work to develop their own self-sufficient food sources not linked to Earth or Mars. Life in the Belt is hard enough with support from the inner planets; creating a self-supporting society in the void and on the surfaces of asteroids and frozen moons is even more daunting:

As long as the domes were still standing on Mars, as long as the critical biosphere of Earth wasn’t in direct threat, humanity wasn’t dead. Miller had to wonder what they were hoping for out in the Belt, whether they’d managed to talk themselves into believing that the rough ecological pockets of the asteroids would sustain life indefinitely. (Corey, *Leviathan Wakes* 358)

There is nowhere natural in the Belt to grow food. Everything, from infrastructure to imported soil to the development of low-light plants, must be constructed and engineered from scratch by the Belters hoping to create their own society in the

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72 Like the early, atopian version of Mars in Weir’s *The Martian*, this task is especially difficult in the Belt’s similarly atopian setting, or what Siobhan Carroll calls the “natural non-places such as outer space and the ocean [...] employed in science fiction as settings that test the limits of human physical and social engineering” (127–128).
endless expanse of outer space. Fred Johnson, nominal leader of the OPA, expresses as much to Holden following the Free Navy’s terrorist attack on Earth:

It’s the blind spot of being a Belter [...] There’s a faith in technology. In the idea of maintaining an artificial ecosystem. We’re able to grow food on Ganymede, so they think humanity’s freed from the bonds of Earth. They don’t think about how much work we had to do for those crops to grow. The mirrors to concentrate the sun, the genetic modifications to the plants. The process of learning to build rich soil out of substrate and fungus and full-spectrum lights. And backstopping all of that, the complexity of life on Earth. (Corey, *Nemesis Games* 436)

Here, through Fred, Corey highlights the importance of Earth and its biosphere and long history of life to humanity—in other words, the evolutionary narrative on the hyperobject Earth; Fred’s argument also implicitly rejects the common refrain of cosmic escapism. The text simultaneously repudiates techno-utopianism at this juncture: the “blind spot” of thinking that all problems are simply awaiting their technofixes, on the cusp of a bright future that never seems to arrive, implicitly rejecting much of the technological optimism that became prevalent throughout the 2010s (and elaborated on in Chapter 1) in response to environmental degradation and ecological perils.73 No matter what, *The Expanse* implies, humanity is tethered

73 The popular computer game *Sid Meier’s Civilization VI* (2016) and its climate change-themed expansion *Gathering Storm* (2019) are instructive in this regard. While building a nation-based civilization from the ancient era to the future, players continually solve problems by “teching” their
to its home planet—this hints at the conservationist and environmentalist appeal running through its pages.

In the same way that basic comes to symbolize Earth, and the terraforming endeavor Mars, so too does kibble for the Belt. The first description of food in the Belt appears during Miller’s police duties early in *Leviathan Wakes*. As the inhospitable world of Ceres comes into focus, Miller wanders the station in the course of an unrelated police call. Investigating an assault in a low-rent district, Miller laconically perceives his surroundings: “The air smelled beery with old protein yeast and mushrooms. Local food” (Corey, *Leviathan Wakes* 18). Here, the storyworld of *The Expanse* first describes what readers come to know as “white kibble.” Later, in the novella *The Vital Abyss* (2015), the texture and flavor of white kibble is described in more detail: “We were sharing a container of white kibble that looked like malformed rice and tasted like the unholy offspring of a chicken and a mushroom” (Corey, *The Vital Abyss* Kindle Edition location 707). *The Expanse* thus paints a world wherein Belters rely on cheap sources of protein and nutrition that can grow without sunlight, namely fungi, like yeast and mushrooms. Although certainly a source of nutrition, such a diet is by no means ideal. Moreover, the use of the term “kibble,” directly associated with non-human animals (especially pets like cats and dogs), presents a troubling dimension to the ubiquitous Belter food. It also makes one consider the name’s possible origins, neither of which is comforting and

way to new solutions. In *Gathering Storm*, burning fossil fuels leads to climate change, rising seas, and increased storms, but players can “solve” the problem with new technologies like carbon capture, renewable energy sources, and—if all else fails—flood barriers. Eventually, however, players can no longer “tech” any further, leading to an escape from Earth on an exoplanet colonization mission as one possible victory condition for the game. As of August 2019, *Civilization VI* sold more than 5.5 million copies worldwide (Jones).
which the text never reveals. Did Earthers first call the Belter food “kibble,” revealing their view of the Belters as something less-than-human? Or did Belters coin this name themselves, perhaps tongue-in-cheek, as a way of satirically commenting on their own status? Either way, the use of the term “kibble” for the primary Belter food cannot be overlooked, especially when reading the Belters as extrapolated future humans based on oppressed social and racial groups. Although being a Belter is not genetic—their appearance is linked to gravity not inherited traits—they have developed a unique society, culture, language, and cuisine that has drifted from Earthers. Moreover, like the kibble of today, Belter kibble is presumably shelf-stable, meaning it has a long duration and is ready to eat at any time. It is practical for a life in the void—it does not spoil, it is made from local ingredients (such as they are), and it is relatively easy to produce, but it is not especially healthful or nutritious. The Belters of Corey’s universe can only access a limited variety of highly processed, less-than-ideal meals, like the contemporary food deserts of the world today from which the Belters descend.

White kibble, the Belter food described by Miller, appears commonplace throughout The Expanse, and serves as an excellent case study for the larger problems of the Belt and artificial ecosystems. Kibble likewise echoes the problem of contemporary food deserts, where high-fat, high-salt, fast food and processed diets supplant nutritious, healthy meals. The asteroids and outer planets governed by the OPA envision the unchecked future growth of policies that cause the inner-city food deserts of contemporary Earth (especially Corey’s native United States)—facing racialized discrimination, largely cut-off from fresh sources of food, and
impoverished. The same holds for those subsisting on basic on Earth, where Amos enjoys a “recycled” corn muffin and petroleum-like coffee. Here, we see the recurring Marxist critique noted earlier by Read running through the series—the impoverished citizens of Earth and Belt, as an underclass, share more in common than they do with the wealthy elite, regardless of nationality. Naomi wanders Ceres looking for a bite to eat:

Now that the OPA ran Ceres, there were also other options. Dhejet and egg curry, cow-style noodle bowl, red kibble. The foods of her childhood. The kitchen on the Rocinante had been designed by someone in the Martian Navy, and the food stocks it accepted were always nourishing, usually good, and sometimes excellent. But they weren’t her food.

She opted for red kibble from a scarred kiosk with adhesive from generations of nightclub flyers caking its sides. It came in a brown pressed-shred container that fit in her left palm with a plastic spatula like a flattened spoon to eat with. The first bite filled her mouth with cumin and her mind with dust-covered memory. (Corey, Nemesis Games 94)

Naomi recognizes that Belter foods are not as healthful or nutritious as those of the inner planets, but she cannot escape the siren song of the food of her childhood in the Belt. Although some Belters reveal a nostalgia for kibble due to a lifetime of consuming it (it is, after all, an acquired taste), its utilitarian aspect is nevertheless paramount. Here, a divergence appears in the series’ portrayal of food: whereas
fresh, “natural” foods are prized and hard to find, “artificial” highly processed foods like kibble are cheap and plentiful, but not healthful. An analogy to both the series’ settings but also reality appears, positioning Earth as far more ideal and desirable than common but barren places like the Belt. However, as food-desert dwellers, Belters have few food options available. The artificial food of the Belt stands in stark contrast to the food of Earth—even for those in basic—and serves as a stand-in for the artificial environments of the Belt.

In contrast to the inexpensive ubiquity of kibble, the special status attached to imported, less-processed foods also appears regularly throughout Corey’s novels. No matter how much the Belt advances toward its own self-sufficiency and independence, it always remains a food desert tethered to Earth. The existence of food deserts shows the lie in the Belter utopian project. To play with the famous line from Lawrence of Arabia (1962) and paraphrased by David (Michael Fassbender) in another Ridley Scott sf film, the Alien quasi-prequel Prometheus (2012): There is nothing in the food desert, and no one needs nothing. Although Corey’s texts are sympathetic to the plight of Belters, and Naomi later supplants Holden as the series’ primary hero and protagonist, The Expanse remains skeptical of building a utopia in space.

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74 The original line uttered by Prince Faisal (Alec Guinness) is “I think you are another of these desert-loving English: Doughty, Stanhope, Gordon of Khartoum. No Arab loves the desert. We love water and green trees, there is nothing in the desert. No man needs nothing.” In Prometheus, David (Michael Fassbender), determined to style himself like and mimic T.E. Lawrence, parrots: “There is nothing in the desert and no man needs nothing.” Both films deal with issues of colonialism, imperialism, oppression, staying home, and deeper questions of hubris and human nature, especially considering that David is an android. The film’s title also plays with Frankenstein’s subtitle.

75 Naomi Nagata supplants her lover James Holden as the main protagonist of the series in Tiamat’s Wrath (2019), echoing some of the other progressive gestures found throughout The Expanse. I examine this transition and its heterotopian implications further in Chapter 4.
Beyond the gravity wells of the inner planets, the importance and value of “real food” is plain. On Earth, Amos can purchase coffee and a corn muffin even on basic, but these simple items might be considered an extravagance in the Belt. In the second novel of the series, the Rocinante’s crew earn enough extra money to purchase a few luxury items: “Breakfast waited on the table: steak and eggs, flour tortillas, and black coffee. Real food that had cost someone a small fortune” (Corey, Caliban’s War 367). This point is highlighted throughout the series whenever food besides kibble or protein pastes are mentioned beyond Earth or Mars. Fresh, nutritious, varied foods are well beyond the limits of what most Belters can afford. Specialty items can be procured in the food desert of the Belt, but only at immense cost. Abaddon’s Gate (2013), reinforces this divergence, when Anna (a pastor living on Europa) and Tilly (a wealthy Earther), eat lunch together in a ship’s mess: “Tilly picked halfheartedly at a farm-grown tomato and real mozzarella salad that Anna could have afforded on Europa by selling a kidney” (Corey, Abaddon’s Gate 128). Even far from her home planet, Tilly can purchase food that has been produced through traditional methods. Her status as a wealthy Earther provides her with luxuries like fresh food, which she takes for granted. Here, Tilly’s caprese salad serves as a metaphor for the The Expanse’s recurring Marxist critiques of wealth disparity in Corey’s future.

Corey highlights The Expanse’s recurring divergence between wealthy and worker—between bourgeoisie and proletariat (and non-worker on basic)—with the case of character Clarissa Mao, who transforms over the series from Holden’s embittered nemesis to a redeemed member of the Rocinante’s crew. Clarissa was
raised in extraordinary wealth by her father, the owner of Mao-Kwikowski Mercantile, one of Earth’s largest and most powerful corporations. Clarissa uses her immense resources to undergo illegal body modification and change her identity to “Melba Koh” to ambush and frame Holden following her father’s incarceration (I examine body modification and its implications more in Chapter 4). The text reinforces her transformation through the change in her diet and available food while she eats incognito with her new coworkers: “Soledad was sitting by herself, gaze fixed on her hand terminal while she ate a green-brown paste that looked like feces but smelled like the finest-cooked beef in the world. Melba told herself to think of it as pâté, and then it wasn’t so bad” (Corey, Abaddon’s Gate 119). Clarissa works to transform herself from the patrician Clarissa to the plebian Melba, but despite her best efforts she is unable to accustom herself to the everyday foodstuffs of most humans living and working in outer space. Having to think of the ubiquitous protein tubes as pâté—something very few humans in Corey’s future on either Earth or elsewhere would even recognize—reveals Clarissa’s true identity and predilections. Clarissa can change her name, her appearance, and even her body, but she cannot give up her own desire for luxury foods made with fresh ingredients. This understanding adds to an analysis of the importance of food in Corey’s texts. In the narrative of The Expanse, food issues are salient not only for their extrapolated relationship to present-day food concerns, but also for their larger environmental implications.

76 It is ironic, to say the least, that Corey chose the surname Mao for the exploitive capitalist family at the center of many of the intrigues of The Expanse given the Marxist overtones of the series’ food critiques.
Despite *The Expanse’s* overarching sympathies for the Belters and their cause, the sf epic’s primary setting throughout the planets, moons, and asteroids of the Belt, and the inclusion and importance of many likeable Belter point-of-view characters like Naomi, Miller, and others, Corey’s texts are nevertheless skeptical of the Belt as a potential utopia. Like the UN’s Earth and the Martian terraforming project, the Belter utopian dream also shatters. The opening of the ring gates causes the Belters to lose their *raison d'être*—the Belt’s resources become unnecessary given humankind’s access to over thirteen-hundred new star systems—and their own utopian impulse likewise collapses. The series’ epilogue, set in the distant future, highlights the ephemerality of a society built in space, noting that Belter creole becomes “a dialect considered dead for a thousand years” (Corey, *Leviathan Falls* 513). This juncture in the novels also represents a delineation between the sf genre’s two primary modes: whereas Corey uses the Sol system to extrapolate contemporary issues into a conceived future, the ring gate serves the role of More’s impenetrable trench in *Utopia*, I argue, by cutting off the allegorical space of the fictional exoplanets from the real world. As I show in the following chapter, the exoplanets themselves do not offer an extrapolated spatial fix—David Harvey’s counterpart to the technofix, or what he calls “capitalism’s insatiable drive to resolve its inner crisis tendencies by geographical expansion and geographical restructuring” (24)—but rather an allegorical prescription for ameliorating the ailments the series posits for humankind’s troubled present and potential future.

Despite the enormous differences between Earthers, Martians, and Belters, what unites these various peoples is their shared humanity: “Centuries of technology and
progress had allowed humanity to create a place for itself in the vacuum and radiation of space, but nothing had overcome entropy or ideology or bad judgment” (Corey, Babylon’s Ashes 192). Michio Pa, another recurring Belter character, hints at one of The Expanse’s overarching themes: “History, Michio believed, was a long series of surprises that seemed inevitable in retrospect. And what was true of nations and planets and vast corporate-state complexes also applied to the smaller fates of men and women. As above, so below” (13–14).

**Protomolecules, Normal Accidents, and Black Swans**

The story of The Expanse is one of intertwined human failure and environmental collapse, backstopped by a sense of optimism despite its portrayal of a bleak future. This optimism is anchored in a belief in humanity itself—despite our manifest problems and failures, the series nevertheless portrays our species as one able to overcome myriad obstacles, while also indicating that just because humanity can choose (and survive through) some future course, other, better alternatives exist than either our present reality or the one envisioned in The Expanse’s narrative. In the same way humankind fails to prevent climate change and other ecological calamities in Corey’s texts—leading directly to Earth’s woes and humanity’s flight to Mars and the Belt—human conflict and warfare likewise leads to the foundering of utopian impulses as well. If there is one thing the Covid-19 pandemic has taught humankind (so far) it is that unexpected events can far outstrip the impact of known, planned ones. “Doors and corners, kid,” Miller warns
Holden with a police analogy, “That’s where they get you” (Corey, *Abaddon’s Gate* 520). In *The Expanse*, the failure of human-constructed environments versus the survival of the natural biosphere of Earth—despite taking a terrible punishment—resonates with contemporary environmental concerns and fantasies of Mars-inspired cosmic escapism. The havoc wreaked by Black Swans and the “normal accidents” of high-risk technologies also reveals the hubris inherent in building a utopia. Bobbie hints at this underlying theme in *Persepolis Rising* (2017) as she wanders around a park and arboretum in Medina Station’s artificial ecosystem: “Insects buzzed about, still the best-designed pollinating system there was. Technology did a lot of things well, but evolution had it beat when it came to environmental systems” (276). A recurring motif found throughout Corey’s series is the fragility of artificial ecosystems and environments when faced with catastrophes, particularly unexpected ones. In *The Black Swan* (2007), Nassim Nicholas Taleb provides an intriguing lens through which to analyze the impact of highly improbable events.77 Taleb explains:

> Before the discovery of Australia, people in the Old World were convinced that all swans were white, an unassailable belief as it seemed completely confirmed by empirical evidence. The sighting of the first black swan might have been an interesting surprise to a few ornithologists (and others extremely concerned with the coloring of birds), but that is not where the

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77 In the second century, the Roman poet Juvenal coined the expression “rara avis in terris nigroque simillima cygno,” generally translated as “a bird as rare as the black swan” (Taleb xxxi). The larger context behind the expression was that such a bird was believed to not only be rare, but nonexistent.
significance of the story lies. It illustrates a severe limitation to our learning from observations or experience and the fragility of our knowledge. One single observation can invalidate a general statement derived from millennia of confirmatory sightings of millions of white swans. (xxi)

From this concept Taleb expounds what he coins Black Swan Events, which share three core principles: “rarity, extreme impact, and retrospective (though not prospective) predictability” (xxii). In other words, Black Swans are extremely uncommon, they have a massive impact, and they are often only rationally explained with the benefit of hindsight. Taleb offers several historical examples, ranging from the outbreak of World War I and later rise of Adolf Hitler to the quick collapse of the Soviet Union and 9/11 terrorist attacks. Other more recent events during the long 2010s would undoubtedly include the surprise 2016 election of Donald Trump and passage of Brexit, and, even more recently, the Covid-19 pandemic. Black Swans can be either natural or artificial. The asteroid that wiped out the dinosaurs was certainly a Black Swan to them, ending millions of years of evolutionary paths in an instant.

Like the Sword of Damocles, the Black Swan hangs over the narrative of The Expanse. The unexpected discovery of the protomolecule, like other Black Swans, proves to be a destabilizing force. One paradigm that emerges throughout Corey’s series is how different places and ecologies react to the destabilization caused by the Black Swan. While all humankind is dramatically affected by the protomolecule, the way that Earth’s natural ecosystem reacts when juxtaposed against the artificial
environments of human-constructed systems contributes to an ecocritical analysis of *The Expanse*. Earth’s biosphere proves adaptable and resilient while human-constructed ecosystems fail. At the same time, all human political, governmental, and social systems—the potential yet failed utopias—buckle under the weight of the protomolecule’s disruption. This, in turn, implies that in an era when humanity is faced with the dire consequences of climate change and other calamities (including Covid-19), the turn of many towards environmental fatalism or seeking escape to Mars and other worlds is a false choice. There are two salient points in Corey’s plot that offer a comparison of the pros and cons of artificial and natural systems: the collapse of Ganymede Station in *Caliban’s War* and the Free Navy’s terrorist attacks on Earth in *Nemesis Games* and *Babylon’s Ashes*. I analyze the collapse of Ganymede as an archetypal artificial ecosystem. Contrariwise, I juxtapose its collapse with Earth’s resilience—due to the redundancy inherent in an ancient biosphere and other hyperobject forces like evolution and geologic time—when confronted with the cataclysmic impact events and their fallout. By demonstrating the resilience of Earth against the failure of such artificial environments, Corey’s texts reveal that humankind is far better off staying on our troubled world and keeping it livable than attempting to find an alternative in the harsh vacuum of space; if humankind does attempt to engineer a utopia, the best place for it is on Earth. Although Corey’s storyworld is one of failed utopias and environmental collapse, it is also one imbued with a profound optimism. Rather than the enjoyment of collapse found in some dystopian tales, *The Expanse* instead seems to offer hope for a bright future by avoiding and navigating the pitfalls of humankind’s past and present. This is a
compelling pivot for an sf text—*The Expanse*, a story about humankind’s colonization and settlement of other worlds beyond Earth, in fact implies that such a quest is inadvisable and doomed to failure, even if humankind’s inherent resourcefulness and ingenuity makes it one possible option.

After the Earth corporation Mao-Kwikowski discovers the protomolecule and unleashes it as an experiment in the form of a plague on Eros Station in *Leviathan Wakes*, human interests continue to work to weaponize the alien organism in *Caliban’s War*. The main locus of their efforts is Ganymede, the “breadbasket of the Jovian system [...] the only place where dome-grown crops stood a chance in Jupiter’s harsh radiation belt” (8). Following the tension of the Earth-Mars conflict in the prior novel, UN and MCR forces battle in orbit and on Ganymede’s surface, wrecking the station’s infrastructure. Praxidike “Prax” Meng, a botanist who lives on the Jovian moon developing soybean plants, witnesses the slow collapse of the artificial ecosystem in the weeks and months following the outbreak of hostilities. Wandering Ganymede in search of his lost daughter Mei, Prax notices the first signs of impending collapse:

The secret of closed-system botanical collapse was this: *It’s not the thing that breaks you need to watch out for. It’s the cascade [...] That was the metaphor he used when he thought about Mei and her immune system [...] Myers-Skelton Premature Immunosenescence they called it, and the preliminary studies hadn’t been able to tell if it was more common outside the well of*
Earth because of an unknown low-g effect or just the high radiation levels increasing mutation rates generally. (Corey, Caliban's War 75-76)

Prax connects two things—the first signs of a trophic cascade that will destroy Ganymede’s artificial environment, and the inherent problems with human life outside the protective envelope of Earth. Humans need gravity and a shield from the radiation of outer space to survive, and leaving that behind leads to genetic and health problems. Later, after meeting Holden and the crew of the Rocinante, Prax explains the cascade in more detail:

It’s the basic obstacle of artificial ecosystems. In a normal evolutionary environment, there’s enough diversity to cushion the system when something catastrophic happens. That’s nature. Catastrophic things happen all the time. But nothing we can build has the depth. One thing goes wrong, and there’s only a few compensatory pathways that can step in. They get overstressed. Fall out of balance. When the next one fails, there are even fewer paths, and then they’re even more stressed. It’s a simple complex system. That’s the technical name for it. Because it’s simple, it’s prone to cascades, and because it’s complex, you can’t predict what’s going to fail. Or how. It’s computationally impossible. (147)

Prax’s assessment shocks Holden; he considers it impossible that such an important station could fail. “‘Ganymede Station,’ Holden said, ‘is the most important food
supply and agricultural center outside Earth and Mars. It can’t just collapse. They wouldn’t let it’ [...] ‘Ganymede’s dead,’ Prax said” (147–148). Holden—an Earther—cannot imagine an ecosystem totally failing. His experience is on Earth, where the billions-year old history of life and evolution has built in a redundancy that cannot be replicated by humans. Even in its environmentally compromised and wrecked state, Earth’s biosphere soldiers onward. Prax proves correct, Ganymede collapses and must be rebuilt entirely. There is no stopping the cascade.

Standing in stark contrast to failed artificial systems like Ganymede (and Mars) is the resilience of Earth. In *Nemesis Games*, Marco Inaros, former paramour of Naomi, Belter terrorist, and commander of the Free Navy, devastates Earth with three impact events from asteroids intentionally lobbed at the planet. Avasarala, leading the UN’s disaster response, asks, “We’re all clear that Earth is fucked, yes?” (507). However, as Prax notes, catastrophes happen in nature all the time. Earth has shaken off numerous prior impact events throughout its 4.5-billion-year history, like the one that resulted in the K-T mass extinction, wiping out the dinosaurs and three-quarters of Earth’s animal and plant life sixty-six million years ago. And that is only the most recent of the planet’s five major extinction events. Earth’s primordial prehistory is filled with impact events, volcanic eruptions, and other environmental traumas. Elvi Okoye, an Earther biologist, declares: “The usual state of nature is recovering from the last disaster” (Corey, *Cibola Burn* 304). Nature is built to withstand such catastrophic events, Earth and some form of the diverse life on it can

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78 Humankind is currently causing Earth’s “sixth extinction” through hunting, deforestation, desertification, destruction of ecosystems, pollution, climate change, and many other human activities.
eventually shake them all off, in a way technological, human-constructed ecosystems cannot. Earth’s biosphere is deep and resilient—it is, after all, also a hyperobject—and long after humanity evolves or disappears life on the planet will likely continue until it is eventually engulfed by the sun in some 7.5 billion more years.\textsuperscript{79}

In his supplemental essay “On Robustness & Fragility,” Taleb discusses the connection between nature and Black Swans. Specifically, Taleb notes, “being old implies a higher degree of resistance to Black Swans […] and the oldest system around is clearly Mother Nature […] Mother Nature is clearly a complex system, with webs of interdependence, nonlinearities, and a robust ecology. It is an old, very old person with impeccable memory” (310–311). Earth is robust and resilient in the ways human settlements beyond the planet can never be—billions of years of evolution, the interaction and diversification of life over geologic time, and the long, indeed ancient, memory of planet Earth make it far more likely to survive almost anything, in time.\textsuperscript{80} Earth, despite Inaros’s best efforts, survives the impact events as well. Billions die, but the planet stumbles on; perhaps down, but certainly not out.

\textsuperscript{79} If humanity still exists at that point, then perhaps we will truly need to decamp for another home.\textsuperscript{80} Ian Malcolm, everyone’s favorite fictional chaotician, makes this point in Jurassic Park: “Our planet is four and a half billion years old. There has been life on this planet for nearly that long. Three point eight billion years. The first bacteria. And, later, the first multicellular animals, then the first complex creatures, in the sea, on the land. Then the great sweeping ages of animals—the amphibians, the dinosaurs, the mammals, each lasting millions upon millions of years. Great dynasties of creatures arising, flourishing, dying away. All this happening against a background of continuous and violent upheaval, mountain ranges thrust up and eroded away, cometary impacts, volcanic eruptions, oceans rising and falling, whole continents moving…Endless, constant and violent change…Even today, the greatest geographical feature on the planet comes from two great continents colliding, buckling to make the Himalayan mountain range over millions of years. The planet has survived everything, in its time. It will certainly survive us.” (411)
Approximately thirty years after the events of *Nemesis Games*, by the series’ seventh novel, *Persepolis Rising*, Earth and the life on it are back on their feet:

After three decades of struggle, Mother Earth was open for business [...] Humanity had done its level best to kick the shit out of the slowly spinning egg. Overpopulation, exploitation, atmospheric and oceanic imbalance, and then three military-level meteor strikes, any one of which would have fucked up the dinosaurs. And here it still was, like a soldier. Scarred, broken, reimagined, rebuilt, and remade. (14)

The survival of Earth vis-à-vis the collapse of Ganymede, Mars, and other artificial ecosystems makes one environmental theme of Corey's series clear. At a time when humankind is threatened by environmental perils like climate change and Covid-19, and looking to the stars and Mars for possible refuge, *The Expanse* points in an opposite, unlikely direction. Earth may face challenges, but it is and always will remain humanity’s home. In a decade saturated with environmental uncertainty and calls to explore and establish colonies and outposts in outer space, *The Expanse* argues that the best place to weather the storm is the one beneath our feet, the one humankind has been on for millions of years.

An ecocritical examination of *The Expanse* reveals several intriguing and unexpected points for a popular sf text. Through extrapolation, Corey’s sf series offers a complex commentary on contemporary human and ecological issues by hypothesizing them into an envisioned future. By utilizing the recurring themes of
basic, the terraforming project, and kibble as envisioned future outcomes for present-day environmental and sociopolitical issues, Corey critiques some problems and pitfalls of our world today into a speculated future. Simultaneously, while sf has long offered utopian dreams and failures Corey updates these issues for the reality of the long 2010s while also offering alternative possibilities. Apart from sf texts that offer somber warnings posed through dystopian or post-apocalyptic settings, many sf narratives suggest the promise of better worlds beyond our own contemporary reality—both in time and space—such as the eternally optimistic Star Trek universe, Ursula K. Le Guin’s famed utopian novel The Dispossessed (1974), or Robinson’s Mars trilogy. An analysis of the places, characters, and plot of Corey’s series, which is neither dystopian nor blindly utopian, but imbued with a hardscrabble human realism and grittiness layered over resilient optimism, presents a paradox. In much the same way that Weir’s The Martian can be used to consider contemporary environmental issues through the novel’s total silence on them, so too can Corey’s The Expanse be examined to understand the inherent perils of humankind’s recent preoccupation with settling other worlds—especially Mars—as an alternative plan to saving an ecologically deteriorating Earth. The Expanse implies that not only is building a utopia hubristic, foolhardy, and likely doomed to failure, so too is the recent fascination with escaping the troubles of Earth for a new home in outer space. Rather than pining for the impossible utopia, moreover, Corey’s text points in another possible direction: the diverse and livable heterotopias offered by the allegorical exoplanets.
Chapter 4
Heterotopian Possibilities: Change, Diversity, and Promise on the Exoplanets of The Expanse on the Page and Screen

Whereas in the prior chapter I examine James S.A. Corey’s The Expanse saga as an extrapolative storyworld of failed utopias on the real, but futurized, places of Earth, Mars, and the Belt, in this final chapter I instead read the series as an allegorical imagining of potential pathways forward for humanity through the related but distinct critical concept of heterotopia. I offer an examination of the latter works and worlds of the series that operate beyond the boundaries of our universe, on the imagined exoplanets beyond the ring in a different narrative space where allegory takes the reins from the extrapolative properties of The Expanse’s earlier novels. In this chapter, I examine some of the exoplanets found in Cibola Burn (2014) and in the triptych of the series’ final three novels: Persepolis Rising (2017), Tiamat’s Wrath (2019), and Leviathan Falls (2021), as well as the novellas Strange Dogs (2017) and Auberon (2019). As a corollary to this examination of the texts’ exoplanets, I offer a connected discussion of the depiction of worlds within the television adaptation The Expanse, which aired first on Syfy and then Amazon from 2015–2022 and how ideas of place and the use of CGI and other filming techniques affect the sf imaginings of not only an extrapolated future Earth, but the heterotopian spaces offered by exoplanet landscapes as well. Like my earlier

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81 Corey released several novellas and short stories over the course of The Expanse’s publication, all of which are collected with a final, epilogue story in the anthology Memory’s Legion (2022).
readings, I analyze Corey’s series and imaginary exoplanets against the grain as well, examining what could be considered a massive spatial fix—more habitable planets than humankind could hope to settle in millennia—instead as an allegorical lesson for striving to create a more equal, just, global human society on a healthier, revitalized planet Earth.

Although Corey’s novels follow the lives of the crew of the independent gunship *Rocinante*, they can be broken down thematically and narratively into three separate triptychs within the nine-novel story arc. The first three novels deal primarily with humankind’s discovery of the protomolecule and its immediate aftereffects for Earth, Mars, and the Belt (which I focus on in Chapter 3). At the end of the third novel, a ring-gate wormhole opens paths to 1372 other star systems, which humanity begins to explore and colonize in the remaining novels. The second triptych deals with the immediate aftermath of the opening of the gates—at first with the establishment of an initial unauthorized colony in *Cibola Burn* (2014) and then with the resulting growing pains and paroxysms within the Sol system of dealing with the new reality opened by new worlds beyond the gates. In *Nemesis Games* (2015) and *Babylon’s Ashes* (2016), the threat posed by these possibilities to the Martian and Belter ways of life leads to an illicit alliance between them. A coup of Martian hardliners led by Winston Duarte and Belter fanatic Marco Inaros launch terrorist attacks against both Earth and Mars to destabilize the power structure of the system. In the final triptych, Duarte’s breakaway Martian forces establish a new colony on the world they christen Laconia and use the abandoned protomolecule technology they capture there to conquer human space in *Persepolis Rising* (2017)
and *Tiamat’s Wrath* (2019). The *Expanse* and the final triptych end in *Leviathan’s Fall* (2021) with the conclusion of the human struggles between Laconia and the underground rebellion as well as the closure of the ring-gate network, saving humankind from an existential alien threat but also separating humankind into over thirteen hundred now-isolated star systems.

Although *The Expanse* begins with an extrapolated depiction of humankind’s expansion within the Sol system, like Saxifrage Russell’s discussion of “break point[s] in history” in Robinson’s *Blue Mars* (1996), a rupture occurs at the end of the third novel, *Abaddon’s Gate* (2013). This break point occurs when humans enter the ring gate to the interdimensional void beyond, and later visit the exoplanets and star systems found through the 1372 other gates in the network. The ring gate therefore demarcates where the extrapolative qualities of Corey’s saga shift to the allegorical. This shift occurs because while the universe envisioned in the text’s earlier novels is conceivable in humanity’s future and set on real places like Earth, Mars, the Belt, and the moons of the outer planets, the alien ring-gate network and the fictive exoplanets beyond are entirely the works of Corey’s imagination. Jameson, writing on Robinson’s *Mars* trilogy, notes a similar dynamic wherein Robinson’s *Mars* serves as not only a literal and fictional laboratory, but also a real place that is simultaneously a cognitive space:

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82 Laconia is named after the Greek region where Sparta is found. Duarte’s militaristic Martian faction styles itself as the ideological offspring of both the original Martian dream and earlier survivalist states like the Spartans.
In other words, if all of Mars is one gigantic laboratory (and in another way it is, and we will also have to think about the novels from that perspective), then it is a unique laboratory in which the variables can never be isolated in the ordinary ways, but always coexist in a multiplicity which can scarcely be mastered by equations let alone by the computer itself [...]. Besides all this, we need to insist on the way in which any first scientific reading of the Mars trilogy must eventually develop into a second allegorical one, in which the hard SF content stands revealed as socio-political—that is to say, as utopian. ("Realism and Utopia" 50)

Here, Jameson argues that Robinson’s imaginings in his trilogy operate on two distinct yet overlapping levels. Literally, Robinson’s novels envision an extrapolative future wherein humankind settles and terraforms Mars to escape the pressures of Earth while also experimenting with new technologies, methods of government, and social organization. At the same time, the Mars trilogy deals with less space-based, more allegorical human questions as well, such as the environmental and societal collapse taking place on Earth, including the disintegration of nation-states and concomitant rise of metanational corporations. Robinson interrogates calcified social hierarchy and systemic inequality, themes as relevant today as when Robinson penned the trilogy in the 1990s. However, whereas Robinson’s vision of Mars in his trilogy is imbued with utopianism, no such vision runs through the pages of Corey’s novels, which instead warn against the hubris and folly of utopian dreams. Unlike the idyllic no-longer-Red Planet established by the end of Blue Mars
(1996), the humans of *The Expanse* take their troubles with them wherever they travel. But this is not viewed as problematic. Instead, Corey’s texts imagine a diverse and varied heterotopian future that celebrates difference, multiculturalism, and political autonomy through human equality and equity, buttressed by sustainable, symbiotic human-environment interaction. In this way, the allegorical future envisioned by the exoplanets of *The Expanse* does not track a naïve utopian impulse, but a complicated and complex heterotopian imagining of a range of possible human futures.

Like the allegorical space opened by the ring network in *The Expanse*, another similar object helps explain the varied notion of the heterotopia. In his essay delineating the term and concept, Michel Foucault likens the heterotopia to a mirror. Comparing the interior image with the exterior frame, Foucault declares:

> The mirror is, after all, a utopia, since it is a placeless place. In the mirror, I see myself there where I am not, in an unreal, virtual space that opens up behind the surface; I am over there, there where I am not, a sort of shadow that gives my own visibility to myself, that enables me to see myself there where I am absent: such is the utopia of the mirror. But it is also a heterotopia in so far as the mirror does exist in reality, where it exerts a sort of counteraction on the position that I occupy. (4)

Corey’s ring shares many similarities with Foucault’s mirror. The space on the outside of the ring, like the mirror, is real. The places that exist within Corey’s future
of the Sol system exist, even if Corey extrapolates human civilization forward several centuries. Earth, Mars, Ceres, Europa, Ganymede, Triton, et cetera, are real, physical places. At night, any human on Earth can see them in the sky, perhaps even imagining ourselves there one day. However, like the virtual space within the mirror’s image, the exoplanets of Corey’s series like Ilus, Laconia, Freehold, Auberon, and a wide range of both named and unnamed others encountered within the novels are only figments of Corey's imagination, brought into existence solely through the ink on pages or pixels on a screen. And, like the reflection in Foucault's mirror, these fictional places are allegorical views of humankind today and possible pathways forward.

Like the other types of places formed with the suffix “-topia,” the heterotopia combines the Greek word “hetero,” meaning “different” or “other,” with “place,” leading it to be a “different place” or “other place.” Foucault first elucidated the concept of the heterotopia in 1966–1967 as part of a radio broadcast series on French culture and utopia and a subsequent lecture given in Paris to the Circle of Architectural Studies (Johnson 791). The lecture was later translated into English and published in *Diacritics* as “Of Other Spaces” in 1986. Foucault begins by contrasting the utopia with the heterotopia, declaring:

> Utopias are sites with no real place. They are sites that have a general relation of direct or inverted analogy with the real space of Society. They present society itself in a perfected form, or else society turned upside down, but in any case these utopias are fundamentally unreal spaces […] there are
also [...] something like counter-sites, a kind of effectively enacted utopia in which the real sites, all the other real sites that can be found within the culture, are simultaneously represented, contested, and inverted [...] Because these places are absolutely different from all the other sites they reflect and speak about, I shall call them, by way of contrast to utopias, heterotopias. (3–4)

Building on his opening juxtaposition of utopia and heterotopia with the different universes evoked by the mirror, Foucault goes on to examine six different features of heterotopias that perform the function of being discursive, layered, other spaces. Foucault’s proposed list covers a wide array, ranging from heterotopias of “crisis,” like a honeymoon hotel, ones of “deviation,” like cemeteries, and refuges of “time,” like a museum (Foucault 4–9). Foucault concludes by describing the archetypal heterotopia, the ship. He opines:

the boat is a floating piece of space, a place without a place, that exists by itself, that is closed in on itself and at the same time is given over to the infinity of the sea and that, from port to port, from tack to tack, from brothel to brothel, it goes as far as the colonies in search of the most precious treasures they conceal in their gardens [...] The ship is the heterotopia par excellence. (9)
Here, a glimpse into the heterotopian resonances of *The Expanse*—although coincidental—begins to come into focus. Corey’s characters travel throughout their universe in the heterotopian space of the *Rocinante*, traveling “through the looking glass” of the ring gates to the imagined heterotopian spaces envisioned on a wide variety of differing exoplanets. And along the way, traveling the interstellar ocean of space, they invariably visit ports, brothels, colonies, and even gardens. Given this, it seems wildly uncanny that Foucault, although giving his lecture at the height of the Space Race of the 1960s, also says: “The present epoch will perhaps be above all the epoch of space. We are in the epoch of simultaneity: we are in the epoch of juxtaposition, the epoch of the near and far, of the side-by-side, of the dispersed,” further noting this “space of emplacement was opened up by Galileo. For the real scandal of Galileo’s work lay not so much in his discovery, or rediscovery, that the earth revolved around the sun, but in his constitution of an infinite, and infinitely open space” (1). In *The Expanse*, Corey offers nearly infinite possibilities on the exoplanets, a space so vast that it is “too big for people [...] not designed for this scale” (Corey, *Leviathan Falls* 277).

The importance of ships, and their names, is something of the truism in the sf genre. Of course Captain Kirk, remembered as brash and cavalier, commands the *Enterprise*. Of course the evil Darth Vader’s flagship at the Battle of Endor is the *Executor*. Of course the *Sulaco* in the anti-corporatist *Alien* franchise draws its name from a town of white domineering silver mine tycoons in Joseph Conrad’s *Nostromo* (1904). After all, as Morton notes, “Spacecraft aren’t just symptoms of our brains, figments of our imaginations. They are autonomous beings. They have something to
tell us" (Spacecraft 8). The ships of Corey's storyworld also have something to tell us, not only about the series’ characters and narrative, but about Corey and the texts themselves. Although there exist myriad starships bursting at their collective bulkheads with weighty, allusive, and intertextual names throughout The Expanse (like the Martian ship Mark Watney noted earlier), there are two that shed further light on an interpretation of Corey’s series. The first is the small shuttle Knight—from the ice hauler Canterbury—where The Expanse's main protagonists Holden, Naomi, Alex, and Amos first become a crew of their own. The shuttle directly evokes Chaucer’s “The Knight’s Tale,” and its themes of the vagaries and instability of human life, and doing the right, noble thing even against all odds. These motifs continue when Holden renames their salvaged gunship Rocinante, after the horse of another literary knight:

Holden punched the comm system on the wall. “Well, crew, welcome aboard the gas freighter Rocinante.”

“What does that name even mean?” Naomi said after he let go of the comm button.

“It means we need to go find some windmills,” Holden said over his shoulder as he headed to the lift. (Corey, Leviathan Wakes 177).

Holden, optimistic to the point of naïveté, is fully cognizant of his own penchant to “tilt at windmills” like his childhood hero Don Quixote. But Holden, who in some ways serves as a stand-in for Corey, also reveals the text’s own self-aware, quixotic
aims. While *The Expanse* critiques contemporary human society and its problematic relationship with Earth's natural environment, going so far as to provide, I argue, both failed extrapolated utopias and the potential alternatives offered by the allegorical exoplanets, the *Rocinante's* weighty name hints that Corey knows the warnings offered by the series are likely futile. Nevertheless, the ship's name reveals the text's intent to “fight the good fight” regardless of the outcome, even if the genie is already out of the bottle, or, in sf parlance, the ship has already blasted off. In this way, Corey and *The Expanse* concede that, like the *Rocinante* crew, they are on a fool’s errand, and there may be no way to change humanity’s current, troubled trajectory, but they still intend to try.

Beyond his proposed heterotopian space of the ship, the vast and varied list of Foucault’s proposed heterotopias has not been without its detractors, and it does not immediately relate to the notion of heterotopia as expanded on by later critics and which I use in this study. Peter Johnson, for example, argues: “[Foucault’s] list of heterotopias becomes almost mischievous in its variety. Heterotopias are defined as sites which are embedded in aspects and stages of our lives and which somehow mirror and at the same time distort, unsettle, or invert other spaces” (790–791). Johnson offers an analysis of not only Foucault’s original concept, but an overview of the way subsequent writers have engaged with and repurposed Foucault’s idea. Moreover, Johnson emphasizes the limits of Foucault’s heterotopia, noting its origins in “an open-ended lecture addressed to architects [...] a bit of provocation to a specific audience” (795). Within this context, however, Johnson nonetheless acknowledges that Foucault’s heterotopia has spread throughout a wide variety of
disciplines and continues to prove itself both popular and timely. In Johnson’s view, Foucault helps reveal that “Life is full of different ‘worlds’: miniature, transient, accumulative, disturbing, paradoxical, contradictory, excessive and exaggerated [...] they are adaptable and versatile [...] Heterotopia is a brief exercise in formulating a different ‘point of view’” (796). Interestingly, as with Foucault’s coincidental invocation of the ship and mirror, Johnson’s reference to the many “worlds” of heterotopia are likewise literalized in the exoplanet worlds of *The Expanse*. Here, like the layered heterotopian spaces proffered by Foucault, Corey’s storyworld itself presents the different potential “points of view” seen in the variety of different allegorical storyworld planets of *The Expanse*.

Heterotopia can mean many things, with writers noting a wide array of potential traits. Heterotopias can be unreal, counter-sites, contested places, inverted spaces, enacted utopias, mischievous mirrors, various, miniature, transient, accumulative, disturbing, paradoxical, contradictory, excessive, exaggerated, adaptable, resilient, postmodern, multifarious, and hybrid. Johnson, in his examination of the Foucauldian origins of the term and its critics, perhaps sums up the resilient diversity of heterotopia best: “heterotopian sites [...] coexist, combine and connect [...] heterotopia introduces a starting point for imagining, inventing and diversifying space” (800). With this as a starting point, in the spirit of being generative rather than conclusive, I proceed to the heterotopian sites and impulses found on the myriad variety of possibilities offered by the allegorical exoplanets in Corey’s texts.
Heterotopian Environments

There are two different, overlapping, and complementary vectors of heterotopia running through the pages of Corey's texts, the human and the environmental. I begin here with a look at *The Expanse*'s critical approach to heterotopian places and environments through the lens of ecocriticism. I then proceed to an examination of the related human heterotopian impulses found side-by-side in Corey's storyworld in the following section. Corey uses the fictional, allegorical exoplanets as a space and place of contrast against his extrapolated depiction of Earth. As discussed in the prior chapter, the Earth of Corey's series is a failed utopia on multiple levels. Not only is the one-size-fits-all governance of the UN a dismal, depressing failure, and the ubiquitous use of basic for housing, food, medical care, and even clothing a disastrous societal model (despite its good intentions), but the Earth of Corey's future is also severely environmentally compromised. Ecosystems are ravished or destroyed, plant and animal life depleted, climate change has inundated coastlines and flooded cities, and the planet itself is severely overpopulated by humans. In contrast, the exoplanets offer a sharp counterpoint—they are expansive, vibrant, and filled with an abundance of lifeforms of incredible variety. An allegorical reading of the exoplanets seems to indicate that humans are not predestined to arrive at Corey's future Earth in our own universe—different choices made today will not constrain posterity in the same ways extrapolated in *The Expanse*. The “future anterior” of Corey's storyworld still lies beyond humankind's horizon, and we still have time to both change course and right
the ship. Considering her own life choices, Elvi Okoye muses: “One little change early on could have meant a whole different life” (Corey, *Tiamat’s Wrath* 278). Corey hints that the same holds true for humanity’s choices writ large—although we cannot rewrite the past, we can make different, better choices in the present, avoiding the troubled fate of humankind’s future depicted in Corey’s saga, including our species’ relationship with our home planet.

I contend that the extrapolative future of Corey’s earlier texts metamorphoses into allegory when the protomolecule’s ring-gate network opens, providing humankind with access to 1373 star systems (including Sol). The exoplanets found through the gates offer a heterotopian space of imagination and experimentation, where humanity can test new systems and possibilities for living together and in a better harmony with the physical environment. The importance of place in *The Expanse* can be tied to both its science fictional narrative as well as its reliance on spaces that lie beyond or outside humanity’s contemporary reality. The exoplanets humans encounter through the ring gates prove habitable, and occasionally Earth-like, but without the burden of calcified history and environmental damage present on humanity’s home planet. Here, *The Expanse*’s exoplanets are antithetical to those depicted in both *Avatar* and *Interstellar*, but for different reasons. In *Avatar*, Pandora possesses not only a vibrant ecology, but also the sapient Na’vi and a toxic atmosphere. *Interstellar*, on the other hand, offers humankind exoplanets that are not only deadly, but equally bleak and barren. Both offer different colonialist fantasies—*Avatar* a troubling perpetuation of human cruelty and folly carried into outer space, *Interstellar* the dream of truly lifeless
tabula rasa worlds. *The Expanse*'s fictional exoplanets, however, are as ideal as they are impossible. Many possess breathable atmospheres, native lifeforms (but nothing sentient), vast resources, wildly different and exotic ecosystems, and more space than humankind could ever need. But, at the same time, they are an improbable spatial fix. Unlike Mars, which has been visible in the night sky throughout human history and is now within inadvisable reach, there will never be an alien artifact that gives humankind a shortcut to many hundreds of immediately habitable worlds. The alternative exoplanet heterotopias posited by *The Expanse* are therefore impossible not only because such planets do not and never will exist, but the text admits that they are similarly impossible, or at least improbable, because humankind will fail to heed its warnings and alter its entrenched, ruinous trajectory. For this reason, I choose not to read *The Expanse*'s exoplanets as an sf spatial fix upon which humanity can escape the history of Earth, like Robinson’s *Mars* trilogy offers, but instead as an allegorical call to rebuild human society and our relationship with the natural environment of our home planet; it is an optimistic, naïve call to reboot human society and its relationship with Earth.

Corey’s series stresses the allegory of the exoplanets by noting their not-Earth-but-Earth-like environments and lifeforms. Walking down the street of the frontier town First Landing on the planet Ilus in *Cibola Burn* (2014), Holden and Amos consider their surroundings:
They walked along the dusty street together in companionable silence for a while. Amos finally said, “Weird planet. Walking in open air at night with no moon is breaking my head.”

“I hear you. My brain keeps trying to find Orion and the Big Dipper. What’s weirder is that I keep finding them.”

“That ain’t them,” Amos said.

“Oh, I know. But it’s like my eyes are forcing those patterns on stars that aren’t really lined up the right way to make them.”

There was another moment of silence, then Amos said, “That’s, like, one of them metaphors, right?” (144–145)

In *Cibola Burn*, the crew of the *Rocinante* travel to Ilus to mediate a dispute between the unofficial Belter settlers and the Earth corporation Royal Charter Energy (RCE), charged with cataloging and exploring the planet. Arriving in orbit, Holden peers down: “The fourth planet, sitting smack dab in the middle of the Goldilocks Zone, was Ilus. New Terra. Bering Survey Four. RCE charter 24771912-F23. Whatever you wanted to call it” (72). Holden’s musings hint at the coming conflict. The humans arriving at the exoplanet agree on little, even the new planet’s name. Whatever its moniker, the planet offers a host of new possibilities, strained through a different way of looking at things. Walking on its surface, Basia, a Belter, considers his new home: “He looked up at the darkness. A billion unfamiliar stars, his same Milky Way galaxy, everyone figured, just seen from a different angle” (13). Meanwhile, peering down from above, Holden observes: “Below, the planet looked enough like Earth
that the fact that it didn't look like Earth was unsettling [...] Ilus had open sea and sky with puffs of cloud, all the markers that Holden’s brain connected with his home world” (106). Ilus, like Corey's other exoplanets, offers a sort of funhouse mirror reflection of humanity and the planet we inhabit, a slightly distorted vision of reality promising new possibilities, vantage points, and views of the world today and humankind’s potential future.

Although Foucault and most critics focus on the heterotopia as a constructed, cultural space, nature is itself a heterotopia in a variety of ways. Werner Bigell observes: “natural spaces are predestined heterotopias because of their distance from cultural centers, scarcity of human population and lack of infrastructure—all of which contribute to a lessening of social control” (3). Bigell’s view of heterotopia here is an anthropocentric one, regarding the perception of heterotopian natural spaces by the humans coexisting with or experiencing them. He notes that “the experience of a natural space is not predetermined by its administrative status [...] it is the relative openness for individual signification that defines heterotopian space” (Bigell 2). Beyond the human-environment interaction level, heterotopia in nature also relates directly to stacked levels of diversity, something plainly manifest on the hyperobject Earth through its sheer variety, deep ecology, and multilayered, redundant biosphere. The staggering scale of life and the physical environment on Earth—outside of anything human—makes the natural heterotopia obvious. As a brief example, there are over 7000 species of earthworm that make Earth their home, 50,000 species of mushroom, 500 species of oak tree. Outside of life itself, the sheer variety of ecologies on Earth is likewise astounding. There are 431
classifications of ecosystems—including five classes of swamp, alone—and many shades a gray between zones, where the definitions and categorizations enabled by language break down and can no longer distinguish the actual differences. And this is but a small example, and solely on Earth. Nature as a whole—the universe—exists on a scale of variety beyond any human imagination. The Milky Way galaxy boasts between 100 and 400 billion stars. There are somewhere in the neighborhood of 200 billion trillion stars in the visible universe—more stars than the English language boasts a word to count. And many, if not most, of these stars likely host exoplanets like those imagined in Corey’s storyworld. The incredible scale of *The Expanse*’s ring gate network and its 1373 systems pales in comparison to the reality of nature. Nature cannot be understood as anything but a heterotopian space.

Ilus provides the first lessons offered by *The Expanse* that then carry over into the series’ later depiction of other exoplanets like Laconia, Freehold, and Auberon, among others. There are several overlapping commonalities found among the exoplanet ecosystems of Corey’s series: they are clean and unpolluted despite their use by the ring-gate builders millions of years before; they contain wide ranges of alien biologies that are both totally different yet analogous to life on Earth; they contain many different types of environments and ecosystems; and they are not overpopulated, either by humans or any other creature or lifeform. In these varied ways, Corey’s imagined exoplanets all contrast starkly with *The Expanse*’s Earth, which is polluted, environmentally compromised by the effects of pollution and climate change, missing former ecosystems, animals, plants, and other forms of
biodiversity, and stuffed to the brim with humanity. Looking down on Ilus, Havelock (Miller’s former partner), muses:

there [...] was the black dot of First Landing, like the first lesion of a rash. It was tiny, but when the ship passed over at night, it was the only spot of light. There were more places and ecosystems down there, more discoveries to make and resources to use, than there had been ever on Earth. It seemed bizarre that they were fighting and dying over that one tiny piece of high desert. And it also seemed inevitable. (Corey, *Cibola Burn* 150)

The frontier-theme found on Ilus in *Cibola Burn* runs through the depiction of other exoplanets in later installments and is also connected to Corey’s metatextual use of heterotopia in genre (discussed more later). For example, when visiting Freehold in *Tiamat’s Wrath* (2019), Alex notes: “Freehold, like most goldilocks-zone planets, had a wide variety of environments. Freehold’s salt deserts were on the same continent as the lush mountains he’d hidden in when they first came and the township that had grown to be a modest city” (387). Visiting Auberon, Naomi thinks: “Auberon was one of the success stories of the new systems. A wide, lush planet with clean water, hundreds of viable microclimates, and a tree of life that coexisted with Earth’s biochemistry in a kind of mutual indulgent neglect [...] It sounded like an exaggeration, but there was a seed of truth there” (235). Finally, looking down from orbit on Laconia during the novel’s final battle, Naomi considers: “Laconia was in night [...] The only light was shrouded by clouds. This was what Earth would have
looked like, more or less, before the first electric light. Before the first satellite, the first orbital shuttle. Before Mars. Before Ceres. Before the Belt [...] Every place had the dream of what it could become” (489). The exoplanets Corey describes are as unique as the different ecosystems and regions of Earth. Yet unlike our degraded Earth today, these Earth-like places imagine a different path, a different human-environment interaction. Corey does not propose turning back the clock to humanity's past, nor does he villainize humankind. Although First Landing is “the first lesion of a rash” in Havelock’s mind’s eye, it is simultaneously “the only spot of light.” Rather, *The Expanse* imagines an alternative future that works to ameliorate some of the mistakes of the past and alter the trajectory of those of the present.

Humanity’s arrival on Ilus brings environmental disaster with it. A sample of the protomolecule, inadvertently aboard the *Rocinante*, begins activating the ancient alien technology on the planet, some of which does not reboot properly after its epochs of slumber. An artificial moon melts down, a robot worker stumbles about, a massive nuclear power station explodes. The devastation on Ilus allegorically serves as a harbinger of what humankind could exact on Earth today. The diversity of the planet is devastated, its climate altered, its ecosystems ravaged:

A whole biosphere—or two or three—passed by [Elvi], teasing and hinting. She wished she could have seen it all before the storm. At best now, they would be able to guess at what had come before and see what came after. She took consolation by reminding herself that was always true. All of nature was a record of crisis and destruction and adaptation and flourishing
and being knocked down again. What had happened on New Terra was singular and concrete, but the pattern it was part of seemed to apply everywhere and maybe always. Even the aliens that had made the artifacts, the protomolecule, the rings, had suffered some vast and cosmic collapse.

(506)

Elvi’s musings serve as a warning of humankind’s potential future. If even the aliens that built the ring gates and forged entire planets could go extinct, so too can humans. And in the same way that humans destroyed Ilus—even unintentionally—humans could likewise do in our present reality on Earth today. Here, Corey mixes the series’ two recurring themes: a gritty realism about humans and our problems, including our troubling relationship with our environment, but also an enduring sense of optimism. Even after the disaster, there is hope. Life goes on, but the life and hope might not be in the form one expects. Just as Earth’s five past mass extinctions paved the way for the rise of mammals and eventually Homo sapiens, and just as some lifeforms (like the neurotoxin-oozing death-slugs) flourish after the cataclysm on Ilus, so too is life likely to continue on Earth beyond a current or future sixth mass extinction. But, although Earth will likely recover (as it did after the five prior mass extinctions), that recovery may take millennia or even longer, and whatever life remains may be posthuman or nonhuman, but probably not human. *The Expanse* considers such posthuman changes and futures throughout the series (something I examine further in the following section), which continues an sf discussion dating back to Shelley’s *Frankenstein*, if not earlier.
The Expanse’s critical approach to environmental heterotopia—a “different place” from our current one, but also one composed of many “different places” itself—can be found in the commonalities between the exoplanets as well as their differences from both Corey’s future Earth and the Earth of our contemporary reality. The humans of Corey’s future seem to have learned some of the lessons from the tragedy of Earth, avoiding some of the same pitfalls on their new worlds that it was too late to avoid on our home planet. Vast regions of the exoplanets remain natural and pristine, and native planets and wildlife embraced and unhindered. Even on Laconia, at the heart of a galactic empire, humans have contained themselves: “Within the boundary of the city, Laconia was cleaner, newer, brighter, and more controlled than most space stations Holden had been on. Just outside it was a wilderness like he’d only seen in storybooks (Corey, Tiamat’s Wrath 6). Holden, of course, having grown up on Earth, has only seen such a wilderness in storybooks because no such wild spaces remain on the crowded Earth of The Expanse’s future. Corey’s apparent push here aligns with the contemporary environmental movement to rewild the planet. Sir David Attenborough, noted British naturalist, makes a similar point in his 2020 Netflix “witness statement” documentary, David Attenborough: A Life on Our Planet. Recounting the loss of nature he’s observed in a single lifetime, Attenborough offers one core piece of advice:

We are facing nothing less than the collapse of the living world. The very thing that gave birth to our civilization. The thing we rely upon for every
element of the lives we lead [...] So, what do we do? It’s quite straightforward. It’s been staring us in the face all along. To restore stability to our planet, we must restore its biodiversity. The very thing that we’ve removed. It’s the only way out of this crisis we have created. We must rewild the world. (54:17)

Attenborough goes on to offer a series of suggestions for ways to help rewild Earth, restore its ecosystems, and reinvent human-environment interaction for the better. He argues humanity must make fundamental changes from fossil fuels to renewable energy, use less land for farming by intensively using both high-tech agriculture while also consuming less meat, protect remaining forests and reforest other regions, create no-fishing zones to help the marine world recover, put human and environmental health above profit, embrace sustainability, and finally, provide more education and combat poverty to slow and eventually end population growth.

Corey’s future Earth suffers the fate of not rewilding the planet, not stopping or at least ameliorating climate change, and not preventing runaway population growth. Seen through the counterpoint of the wild expanses, biodiversity, and wide-open spaces offered by the exoplanets, some potential ways to avoid the environmental calamity of Corey’s failed utopia of Earth become clear. In *The Expanse*, Earth is a degraded ecological mess, able to meet humanity’s basic demands and needs, but with everything stretched to or on the cusp of its breaking point. Thirty billion people live on the overpopulated, thoroughly cultivated planet, half of which survive on basic at the razor edge of existence. Opportunity,
employment, and education remain beyond the reach of most people, and the planet stumbles along. The exoplanets, in this way, offer an allegorical alternative to the troubles of Earth, a different way things might be. In my reading, I argue that *The Expanse* does not endorse humanity’s flight to the stars for better prospects elsewhere, like the settings and places at the heart of its narrative, but rather that the series hopes humankind will act to forestall the calamitous future envisioned within its pages. Considering her life in the final novel, *Leviathan Falls* (2021), Elvi wonders: “what a very different life she would have lived if she’d made a few different decisions at the start” (243). *The Expanse* is a call-to-action to make those different decisions now. Our present-day is the very calcified past that predetermines many aspects of humanity’s fate in Corey’s sf future. By offering alternative examples of human-environment interaction on the allegorical surfaces of the exoplanets, Corey provides a different point of view for how humanity can change its ways: rewilding the planet and preserving remaining wilderness, reconsidering land use and farming practices, protecting ecosystems and maintaining biodiversity, and preventing the calamity of climate change. But to do these things, humanity will need to do them together, or, at the very least, without tearing each other apart. And one way the series hints for us to prevent this potential future is to not only change our society to embrace inclusivity and equality and difference, and not only retool our species’ exploitive relationship with our planet’s natural environment, but potentially by changing our very selves.
Heterotopian Bodies

“Heterotopia” can mean many things. The heterotopia envisioned by Michel Foucault is unique from the heterotopia discussed by Peter Johnson. Other writers like Edward Chan, Joan Gordon, and renowned sf author Samuel R. Delany offer similarly divergent definitions of the concept. Just as heterotopia envisions a “different place” or “other place,” so too does the term itself invite a wide variety of differing definitions and understandings. Chan envisages heterotopia through the concept of utopia: “‘heterotopia’—that is, a postmodern version of utopia, a utopia that has worked itself out from the questions posed by dystopia” (181). Gordon, meanwhile, applies the concept of heterotopia to British sf author China Miéville’s novel *Perdido Street Station* (2000). Contrasting her own notion of heterotopia with its Foucauldian genesis, she describes it: “A multifarious place [...] a place made up of other places or of many elements, a hybrid place” (463). Finally, in a 1990 interview with *Science Fiction Studies*, sf author Samuel R. Delany discusses his own novel *Trouble on Triton: An Ambiguous Heterotopia* (1976). Delany makes several intriguing points about his own use of heterotopia in his writing, noting that the heterotopian setting on Triton and its protagonist Bron opens up a space that allows many options: “the variety of choices means that novelistically the book can also deal with a variety of problems—can show how they interrelate” (305). Delany also draws from not only the philosophical heterotopia, but other meanings of the word in constructing his world:
“Heterotopia” is, after all, a real English word. It’s got several meanings [...] a major definition of “heterotopia” is its medical meaning. It’s the removal of one part or organ from the body and affixing it at another place in or on the body. That’s called a heterotopia. A skin graft is a heterotopia. But so is a sex-change—one of the meanings of the word. So there. (318–319)

Delany’s statement pulls in not only differing understandings of heterotopia as a concept of place, but, appropriately, of the word itself and all its potential meanings and convergences. And, of course, the character Bron living in the heterotopian space of Triton undergoes a sex change, leading to a certain stacking of heterotopias that Delany plays with in his novel.

Delany’s invocation of the medical definition of heterotopia and the mismatching of body parts returns us to one of sf’s (and this study’s) origins—Mary Shelley’s Frankenstein. As in Frankenstein, the transformation of the human body and the dream of immortality are other recurring features of The Expanse. This is also a concept examined in Robinson’s Mars trilogy, which, as noted in Chapter 3, Corey’s series alludes to and references throughout its duration. Whereas in the Mars trilogy Robinson’s characters debate the viability of both terraforming Mars as well as “areoforming” humans themselves (in other words, changing themselves to survive on Mars rather than transforming Mars to suit humans), in the end the trilogy focuses far more on building a new society on a terraformed Mars than it does on changing the human body itself. As discussed earlier, however, unlike in the Mars trilogy, the terraforming of Mars fails in The Expanse. At the same time, Corey's
texts include numerous examples of changing the human body in ways not considered by Robinson, in what is yet another layer of the series’ use of heterotopia, and also one of its potential messages. A range of characters in *The Expanse* undergo body transformations, some intentional and planned, others random and accidental, from *Leviathan Wakes* through *Leviathan Falls*. In the first novel, both diverging instances occur. Early in *Leviathan Wakes*, when Holden and the other eventual Rocinante crew are still serving aboard the ice-hauler *Canterbury*, Paj loses an arm in an accident:

A month earlier, Paj had gotten his elbow pinned by a thirty-ton block of ice moving at five millimeters a second. It wasn’t an uncommon injury among people with the dangerous job of cutting and moving zero-g icebergs [...the medic said,] “I checked the policy, and Paj here's been signed on long enough to get [a prosthetic] with force feedback, pressure and temperature sensors, fine-motor software. The whole package. It’ll be almost as good as the real thing. The inner planets have a new biogel that regrows the limb, but that isn’t covered in our medical plan.” (Corey, *Leviathan Wakes* 9)

This event introduces the reader to the advanced medical technology of Corey’s universe, the marginalization of Belters, and also (conveniently enough) gestures to the same ice that dominates the narratives of *Frankenstein* and *The Terror*, but now in the form of frozen asteroids orbiting Saturn. The other end of the spectrum of body modification occurs through the protomolecule, when it appears later in the
first novel: “a human torso—rib cage, spine, trailing lengths of what used to be intestines and were now the long black threads of the protomolecule—[pushed] itself along on the stump of an arm” (427). These twin passages introduce the reader to the theme and range of body modification possible in *The Expanse*—from the sf regrowth of a missing limb to the horrifying potential opened up by the discovery of the protomolecule that carry through the series.

One of *The Expanse*’s most dynamic characters is also the first major character to engage with extensive body modification: Clarissa Mao. Clarissa connects two of the series’ recurring themes of body modification and redemption. Her story begins in the third novel, *Abaddon’s Gate* (2013), and continues through her character’s death in the seventh novel, *Persepolis Rising* (2017). Clarissa’s character arc begins on a journey of (misguided) revenge against Holden and the crew of the *Rocinante*—their actions in the prior novels led to the death of her sister and downfall of her father and family empire, at least from her point of view. Clarissa’s body modification—illegal implants to further her revenge—appear in her first chapter:

Her implants were triggered by rubbing her tongue against the roof of her mouth. Two circles, counterclockwise. It was a private movement, invisible. Internal. Oddly sensual. It was almost as easy as just thinking. The suite of manufactured glands tucked in her throat and head and abdomen squeezed their little bladders empty, pouring complex chemistry into her blood. She shuddered. It felt like orgasm without the pleasure. She could feel
conscience and inhibition sliding away like bad dreams. She was fully awake and alive. (Corey, *Abaddon’s Gate* 35)

Clarissa uses her increased speed and strength to commit murder to further her goals on several occasions. Like Lady Macbeth, she becomes haunted by her crimes, and is eventually captured and imprisoned. When Amos later visits her at a UN prison on Earth, she notes the downsides of her implants that have destroyed her health, but she is resigned to her fate: “It’s fair. I did bad things […] Sometimes you don’t get redeemed […] Not every stain comes out” (Corey, *Nemesis Games* 233). Clarissa implies that her mods are not the problem, the mistake lies with herself. After the Free Navy’s attack on Earth, Amos helps Clarissa escape and she completes her redemption by serving aboard the *Rocinante*, the ship she once intended to destroy, for the remaining years of her life. Clarissa’s case is an interesting one. At first, her body modifications seem wrong, as she uses them to commit crimes and murder innocents. Later, however, leading up to her death, she uses them one final time to save the *Rocinante* crew (and perhaps through them humanity). Here, the series seems ambivalent or ambiguous about body modification—it is not the mods themselves that are wrong, it is Clarissa’s use of them that matters. Body modification—changing humanity or perhaps human nature—is not inherently wrong or evil, the means and the ends matter.

Body modification increases in intensity as the series progresses. In the final two novels, it takes on a variety of forms, but most interestingly in the forms of Amos and the series’ prime human antagonist Winston Duarte, self-proclaimed High
Consul of Laconia. The two characters serve as doppelgänger reflections of each other, while at the same time channeling shades of *Frankenstein*. The allegory here is not exact, but as Duarte’s daughter Teresa muses: “She liked the analogy not because it was accurate, but because it was evocative. That was what made analogies useful” (*Corey, Tiamat’s Wrath* 42). Amos is killed in front of Teresa by Laconian soldiers, but his body is rebuilt by the doglike repair drones that populate Laconia from before humankind’s arrival on the exoplanet. Amos transforms, his physical appearance changes to one eerily like Frankenstein’s monster: “His eyes were black, his skin gray” (496). He becomes, it seems, immortal.

On the other hand, Duarte dreams of immortality, and uses the protomolecule to modify himself through the hands of his own Victor Frankenstein, the narcissistic scientist Paolo Cortázar. Duarte’s appearance represents almost the antinomy of Amos’s: “The opalescence in his iris was more pronounced, and something seemed to glow from under his skin” (227). The two men share compelling commonalities but also stark differences. They are both sociopaths: Amos from his youth running with gangs on the mean streets of Baltimore, Duarte for his obsession with becoming humanity’s unquestioned immortal leader. Amos, however, knows that “[s]ometimes you do something bad enough that you carry the consequences for the rest of your life and take the regrets to your grave” (*Nemesis Games* 233). Duarte dreams of power and immortality, believing himself the only possible savior of humankind. His hubris, like Frankenstein’s, is staggering. Elvi Okoye notes that Duarte’s and Cortázar’s protomolecule experimentation “was an act of hubris that took her breath away” (*Tiamat’s Wrath* 308). At *The Expanse’s*
conclusion, Duarte dies but Amos survives. Duarte’s hubris dooms him—he wishes to be immortal and humankind’s savior, but he cannot see beyond his own limitations. Holden notes: “He was grandiose. He was ruthless. He was a genius at a couple of things and under the misapprehension that it meant he was smart about everything. But in his mind, he was doing the right thing” (Leviathan Falls 240). Duarte chooses to pick a fight with the ring-gate entities and almost takes humankind down with him. He fails and dies.

Amos, on the other hand, becomes accidentally immortal, remains true to himself, and, self-aware of his own faults, continues to look to others for guidance to supplement his own humble nature. Unlike Duarte, Amos is the only major character to remain alive in the series’ postscript, set over a thousand years in the future. Even then, Amos remains his humble self. Arriving on the ravaged remains of Earth in the distant future, Marrel meets Amos:

“So it’s been a rough millennium around here. We’re starting to get our shit together, and I’ve been doing what I can to help with that, but it’s slow going.”

“Are you a leader of these people?” Marrel asked.

“I’m not into job titles. Name’s Amos Burton. If we’re good, I’m just some asshole. If you’re here to start some shit, I’m the guy you’ll have to go through first [...] Now that we got that shit out of the way, follow me. We’ll grab a few beers and get reacquainted. (Leviathan Falls 513)
The nine-novel story arc ends with this closing meeting. The series’ epilogue highlights several of the recurring themes of *The Expanse*, relating to both humankind and our relationship with our home planet. Humankind in our present reality stands at a fork in the road. *The Expanse* indicates that our species cannot proceed as we are now without leading us into the failed utopias and human and environmental disasters of *The Expanse*’s storyworld. There are two choices, it seems: change our planet, or change ourselves. And Corey’s series indicates that changing our planet (or at least expanding beyond it) may eventually be possible given human ingenuity and resourcefulness, but that does not mean it is a preferable option. On the other hand, humanity also has the increasing technology to change ourselves in a variety of ways. Not only our bodies, but also our societies, our government, our ways of life, our human-environment interaction. Amos, a damaged sociopath from a Baltimore gang who seeks redemption in space only to become immortal and return to Earth seems like an unlikely hero. But throughout the series he works to better himself, protect the innocent, and learn from those around him. Humankind does not learn its lessons when the series concludes—Earth lies in ruins, humanity remains scattered after the closing of the ring gates, and Amos remains. Like *Frankenstein*, Corey’s *The Expanse* also warns against hubris and the limits of technology. The series’ postscript seems to imply that humankind must focus on rebuilding and saving our home planet, even if we must change ourselves to do it.
Human Heterotopias

*The Expanse* not only presents the exoplanets as an allegorical environmental heterotopia, but a human one as well—not only the heterotopian physicalities of human bodies and themes of posthumanism, but more equal, diverse, inclusive human societies as well, even with those who oppose such things. The space that opens beyond the ring gates provides a fertile imaginative place to examine different human social, governmental, economic, and other systems. Moreover, the multifaceted opportunities imagined by the exoplanets also offer a space of possibility where a diverse variety of humans live together to forge a new multicultural society not constrained by present-day racial, gender, sexual, cultural, religious, or other norms. Edward Chan posits: “heterotopia presumes, unlike utopia, the inevitability of social difference” (181). Difference, however, is not considered a negative trait in a heterotopia; rather, diversity is its strength. Discussing Samuel R. Delany's *Trouble on Triton* (1976), Chan observes:

Delany’s *Triton* is a heterotopian narrative that also pictures utopia. The novel is utopian in the sense that it narrates what many consider an ideal future society [...] If in a certain sense utopia is about the erasure of social difference (the classless society, political equality, a separatist utopia of only women)—or even of its “neutralization”—then heterotopia is the maintenance of social difference, a “resignation” to its inevitability. However, this is not a cause for pessimism, nor is it a negative proposition. (Chan 205)
Vast differences exist among the exoplanets, from their environments to chosen governments to means of colonization, but one thing that unites them is their embrace of diversity and melding of different strains of humanity.

Even as, discussed in Chapter 3, traditional forms of racism and bigotry encountered in the world today have largely disappeared by the timeline of *The Expanse*, others arose to take their places. “Environments of origin,” rather than skin color, dominate racial politics in Corey’s novels. Earthers, Martians, and Belters pejoratively refer to each other as “squats,” “dusters,” and “skinnies,” respectively; this animosity and use of slurs present prejudices that rival those of the present-day. However, these prior differences, vehemently held by many and analogous to contemporary racial and/or national divisions, begin to fall away after the opening of the ring gates. The incident on Ilus in *Cibola Burn* serves as a template not only for the characters and story arc of the novels, but for Corey’s vision of heterotopia and series’ themes overall: “In the dimness and the wreckage, it was hard to tell which of them were squatters and which were RCE. Even Belters and Earthers were hard to differentiate now” (306). The same holds true for Naomi and Havelock, trapped in a decaying orbit over the planet: “For a long moment, they floated together: prisoner and guard, Belter and Earther, corporate employee and government saboteur. None of it seemed to matter as much as it used to” (369). The settlement of the exoplanets does not erase social/cultural/religious/economic difference, but rather opens up a space where people accept their differences and begin to live together despite them.
The fusion of various groups that were starkly differentiated in the early novels of the series increases in pace in *The Expanse*’s final triptych. Whereas Earther, Martian, and Belter cuisine were rather unique in novels like *Leviathan Wakes* and *Caliban’s War*, they begin to merge in later installments like *Tiamat’s Wrath*: “The restaurant did a good Belt/Mars fusion menu. Something called white kibble that was related to the real thing, but with fresh vegetables and bean sprouts. Rounds of vat-grown beef-pork hybrid cooked in the shape of a Petri dish and touched with a sweet hot sauce” (28). What is important here is not that this is an entirely new cuisine, but rather a mixture of recognizable elements drawing from disparate cultures and histories. Not only the fusing of Belter and Martian culinary history and tastes, but also the hybridization of beef and pork, hinting to multiple layers of mixing, none of which are portrayed as troubling or problematic. *The Expanse*, which uses food as part of its extrapolative critique of present-day human society, shifts to using food as an allegory to carry its inclusive message of diverse, multicultural heterotopia.

Not all fusion menus work. Some foodstuffs will likely never pair well together. Such mixtures like the Italian burrito, waffle taco, or ramen burger may never go mainstream—but then again, maybe they will (Willett-Wei). Corey does not envision a future totally free from conflict on his exoplanets, merely a livable one better than our present reality. Chan opines: “a heterotopian narrative does not preclude notions of utopia entering into its consideration: the space it imagines may still present a more desirable reality” (181). The heterotopia envisioned by *The Expanse* is decidedly not a utopian one, but it is still an improvement over the
warfare, social strife, stratified hierarchy, and environmental degradation established in the earlier novels. The series and its characters seem almost metatextually aware of these issues: Holden says, “I want this war over with, and a real peace established. The kind where people can be angry with each other and hate each other and no one has to die over it. That’d be enough.” (Corey, Tiamat’s Wrath 398). Holden offers something of a heterotopian manifesto when speaking to a representative of Duarte’s militaristic Laconian Empire, the authoritarian planet with the dream of a single human society under one rule:

   Humanity has done amazing things by just muddling through, arguing and complaining and fighting and negotiating. It’s messy and undignified, but it’s when we’re at our best, because everyone gets to have a voice in it. Even if everyone else is trying to shout it down. Whenever there’s just one voice that matters, something terrible comes out of it. (Corey, Persepolis Rising 394)

Here, Holden offers a defense of diversity, freedom of speech, and contrasting opinions. One of The Expanse’s recurring themes is that one must consider possibilities, even those one disagrees with—even the potential alternatives of an authoritarian, militaristic government or hereditary, absolute monarchy. Laconia may not seem like an obvious heterotopia, but it nevertheless offers a different possibility from the one on Earth today, even though Corey does not present it as a desirable alternative, it remains a possible option nonetheless. A seamless utopia this is not.
Corey goes on to offer a clear critique of the utopian impulse, and simultaneous defense of heterotopia, in the saga’s final novel, *Leviathan Falls*. Elvi and her husband Fayez discuss Ursula K. Le Guin’s famous 1973 short story “The Ones Who Walk Away from Omelas.” In Le Guin’s story, Omelas is a philosophical utopia, where an omniscient narrator details the summer festival in the utopian city of the same name, where all is bliss and happiness and freedom from want, except for the perpetual suffering of a single child on whose misery the prosperity of Omelas depends. Fayez questions the ethics of Elvi’s use of the child Cara in a dangerous experiment that may save humankind, even with Cara’s willing consent and participation. Elvi responds: “We’re not doing anything here to make a beautiful, gracious, pleasant utopia. If we win, the lives we save will be the same mix of shit, frustration, and absurdity that they’ve always been” (205). Humankind is not perfect and will never be able to construct a perfect society, *The Expanse* seems to argue, but it is at least worth trying to build one that is better than our current one, one where all humanity has a voice.

Corey uses the allegorical space offered by 1373 star systems as a cognitive laboratory for different forms of human social, economic, political, and governmental systems. Holden muses: “Now humanity was scattered to more than thirteen hundred new solar systems [...] It was a massive parallel experiment in the possible forms of human collective, a chance to remake the structure of culture itself. But somehow, it all wound up seeming very familiar” (Corey, *Persepolis Rising* 44). As discussed in the prior chapter, *The Expanse* begins with three competing ideological systems, akin to nation-states writ large, in the form of the liberal
democracy of the UN, conservative militarism of the MCR, and something like anarcho-syndicalism with the OPA—that is, some hybrid of strong personal responsibility within a collectivist, labor-oriented society: “Belters were viciously independent, but they also understood what it meant to rely on the community around them” (Corey, Leviathan Falls 65). The exoplanets, however, offer myriad other options for experimentation. Just some of the other social constructs mentioned in the series include Freehold’s gun-obsessed libertarianism, Laconia’s imperial authoritarianism, Nieuwestad’s “company town” planet, and a wide variety of others. These planets offer potential forms of organizing human society in contrast to the extrapolated failures of the UN, MCR, and OPA. As the ring gate network closes at the end of the final novel, Naomi considers: “I think we got lucky. I think we were one little system in a vast, unreachable universe that was always on the edge of destroying itself, and now we have thirteen hundred chances to figure out how to live with each other. How to be gentle with each other. How to get it right. It’s better odds than we had” (Corey, Leviathan Falls 510). The Expanse does not attempt to stifle debate and elevate any form of preferable or perfect system, it simply strives to indicate that the more options and freedoms the better, a democratization of ideas and ideologies.

The importance of finding an alternative to humankind’s current trajectory that leads inexorably to The Expanse’s future Earth appears even more dire in the series’ epilogue. Set a thousand years after the major timeline of events of the series, Marrel arrives on what remains of Earth to find a troubled, postapocalyptic society (511–514). Earth stumbles on, but it has “been a rough millennium” (514). Here,
Corey closes his appeal to choose a different path than the one humankind is currently forging. The choices made today affect both Earth and humanity’s future, and changing things now can prevent Corey’s envisioned storyworld—both the failed utopia of the UN’s governance and social ubiquity of basic, but also the postapocalyptic one that eventually rises in *The Expanse*’s epilogue. *The Expanse* unites several of its recurring and overlapping themes in its closing pages. The novels appeal for diversity, multiculturalism, freedom of speech, nonviolence, democracy, and skepticism of centralized authority or hegemonic governance. At the same time, they promote environmental preservation, the rewilding and restoration of ecosystems and Earth’s biosphere, and other ecological initiatives meant to combat climate change and other ecological perils. These new paradigms of human-environment interaction are shown to be complementary, and also beneficial to both humankind and the physical environment. Despite its focus on gritty realism through its heterotopian impulse, the series remains, at heart, deeply optimistic about humanity’s potential future: “Fatalism had its dark attractions, after all. Hopelessness and despair could almost look restful” (Corey, *Leviathan Falls* 67). *Almost*, but not quite.

**Heterotopian Texts**

*The Expanse*’s heterotopian push for inclusivity and diversity also finds its way into the written text and use of genre in the novels themselves. *The Expanse* offers depictions of a wide range of planets and places through its third-person
narration limited to the perspective of its numerous (forty-two, to be exact) point-of-view characters. Each novel provides unique, one-off characters for its respective prologue and epilogue that bookend alternating, repeating chapters told from the vantage point of a wide variety of different individuals. By utilizing this storytelling technique, Corey not only provides a multiplicity of voices offering different perspectives, opinions, and biases, but ones that shift over the course of the series to become more diverse and inclusive, reflecting many of the social changes that developed over the course of the 2010s, gesturing to events such as the legalization of same-sex marriage in many countries, turns towards gender equality like the #MeToo movement, transgender rights, and disability awareness, as just a few prominent examples.

This increasing diversity of voices (and who those voices are) within the textual and narrative choices of *The Expanse* coincides with the series’ transition from the failed utopias of the early novels to the heterotopian possibilities of the exoplanets. Moreover, in addition to the characters’ perspectives providing different viewpoints, they also feature an inherently environmental angle tied to place: by shifting between Earthers, Martians, and Belters (and eventually others, like Laconians and even non-human aliens), Corey offers a closer, detailed view of the series’ wide-ranging settings that help inform some of the series’ environmental undercurrents. The reader sees different views of Earth, Mars, the Belt, and beyond, each with different environments—some natural and others artificial. Whereas, for example Bobbie Draper offers a magnified view of Mars and its terraforming program, Teresa Duarte provides a close-up view of not only life on Laconia, but the
life of a would-be galactic dictator’s only child and heir apparent. The numerous characters offer complicated and oftentimes contradictory views on the events of the novels (which also commonly depict the same events from multiple perspectives), providing a varied cross-section of human society and its inherent complexity and differences.

At the same time, by shifting character perspectives over the course of the series’ nine novels, from the relatively homogenous first novel to the increasingly diverse and inclusive later novels, Corey offers an alternative to a prevailing and problematic symptom of contemporary sf, a genre too long and too often dominated by the viewpoints of heterosexual, white men, as evidenced by the case of *The Martian* in Chapter 1 in particular. Although James S.A. Corey is in fact a pseudonym for writing duo Daniel Abraham and Ty Franck (two heterosexual, white, American males), unlike Andy Weir, for example, whose Mark Watney from *The Martian* and Ryland Grace from *Project Hail Mary* are clearly patterned on himself, they look beyond their own demographic group when crafting major, point-of-view characters. The first novel of the series begins with two, white male point of view characters, Holden and Miller. Although Holden is an Earther and Miller a Belter, and Julie Mao (an Asian Earther) provides the novel’s prologue and Fred (a Black Earther) the epilogue, the two white men dominate the narrative. Holden, in particular, serves as the series’ primary protagonist, although his star begins to fade during *The Expanse*’s final triptych, to be replaced by Naomi Nagata (a mixed-race Belter).
Beginning in the second novel, Corey begins to build a much wider, more inclusive, and more diverse offering of vantage points. Characters from different backgrounds, socioeconomic status, gender and sexuality, cultures, planets—and even nonhumans—add their voices to the chorus. This increasing diversity did not go unnoticed by reactionary fans. LM, reviewing *Tiamat’s Wrath* on Amazon, laments: “Not much scifi in this book but much talk. Have the authors forgotten there are male readers too?” Norm De Plume echoes LM’s concerns, writing: “I have no problem with strong female characters, but I’m getting sick of the pandering to the LGBTQ etc.” Finally, Amazon Customer decries the series as becoming “so woke,” mourning: “All white males have been relegated to roles as extras (yes, even Holden). The non-white males that are left are caring, soft and great supporters of their super-strong and powerful warrior women.” White male characters, it should be noted, do not disappear from the series, nor does *The Expanse* lose its sf properties; other, diverse voices simply enter the fray. Point-of-view characters increase in scale and diversity to match the dispersal of settings and expansion of the storyline, even if this causes unease for the saga’s right-wing, white male (former?) readers.83

Finally, although *The Expanse* is at its core a space-based, science fictional series, Corey dabbles with an array of other genres within the series’ pages, offering another form of textual heterotopia that complements the texts’ other similar aspects. The first novel of the series, *Leviathan Wakes*, merges the space opera with

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83 SF has long been dominated by a white, male, heterosexual authors writing for a predominantly white, male, heterosexual fanbase, but in the early twenty-first century this is finally beginning to change.
a film noir and police procedural. Holden’s story of space battles contrasts with Miller’s hard-boiled detective mystery. *Caliban’s War*, on the other hand, takes the form of a political thriller through the eyes of Avasarala’s campaign of intrigue within the halls of the UN. Teresa’s plotline in *Tiamat’s Wrath* follows the coming-of-age, *bildungsroman* format, while Holden’s story is a captivity narrative. Many types and means of storytelling can be found in Corey’s text, and literary allusions, intertextual references, and tongue-in-cheek homages to other works of the sf canon frequently appear. *The Expanse* alludes to other works ranging from Weir’s *The Martian* and Robinson’s *Mars* trilogy to *Star Trek* and *Frankenstein* and Ursula K. Le Guin. By tying a range of genres, literary allusions, and points of view together in the text, Corey supplements the series’ push for diverse and inclusive viewpoints into another form of heterotopia buried within the pages themselves, while also providing as many layers of complexity and diversity within the text as the heterotopia it strives to promote.

**One Last Heterotopia: On the Screen**

Like Andy Weir’s *The Martian*, the success of which led to Ridley Scott’s 2015 film version of Mark Watney’s ordeal on the Red Planet, or Dan Simmons’s *The Terror*, which was made into a TV series by AMC in 2018, Corey’s *The Expanse* was adapted and transformed from the page to the screen. *The Expanse* series premiered on the Syfy Channel in December 2015 and ran for three seasons before being cancelled due to financial constraints (it was jokingly known at Syfy as “The
Expense”). However, Jeff Bezos, owner of Amazon and space exploration company Blue Origin (and a fan of the show), purchased the rights from Syfy after the show’s cancellation (Snowden). In December 2019, *The Expanse* premiered its fourth season on Amazon Prime, followed by a fifth and sixth season. The series has now concluded following the sixth season, following the events of the sixth novel *Babylon’s Ashes*, or what Abraham and Franck (Corey in the literary realm, but using their real names in the television world) call a “natural pause point” (Simons).84 As in the case of *The Martian*’s metamorphosis in medium, the TV version of *The Expanse* also adds and highlights environmental themes that are muted or otherwise absent from the original source material, while providing a cast and points of view that are at least as diverse, if not potentially even more so, than those in the novels. Considering a few examples of environmental messaging embedded in the show’s visuals and depicted settings contributes to an ecocritical analysis of the series’ environmental themes, especially since Abraham and Franck also serve as executive producers for the television show.

Climate change appears in *The Expanse*’s literary form, particularly through the eyes of Amos’s wanderings in eastern North America in *Nemesis Games* and his background novella *The Churn*: “Time had not been kind to the city. Its coastline was a ruin of drowned buildings kept from salvage by a complexity of rights, jurisdictions, regulations, and apathy until the rising sea had all but reclaimed them for its own” (Corey, *The Churn* Kindle Edition location 99). However, despite the

84 Although the series is officially cancelled, I suspect it will return at some point in the future. Several decades pass between the sixth book and the seventh, leaving plenty of time for the series to return with the same actors, slightly older, at a later date.
presence of global warming on *The Expanse’s* textual Earth, rising sea levels and related ecological calamities associated with a changing climate prove even more overt in the television series. This becomes obvious early-on; during the opening credits, scenes depict the fast-forwarding of time from the present to future, including images of the settling of Mars and development of the Belt, but also extrapolations of a warming Earth and the construction of seawalls, disappearing coastlines, and rising ocean levels. As the skyline of New York City climbs higher, so too do the waters around it. Like the novels, the characters of the series do not often discuss environmental issues like climate change directly, the altered climate and ecological decay are already facts of life for them (the “future anterior” again), just as present-day humans cannot enjoy the calls of the Carolina parakeet, companionship of the Tasmanian tiger, or taste of silphium, but we do not dwell on it or discuss it during our day-to-day lives. Instead, the settings of *The Expanse’s* storyworld and the show’s use of visuals do this for the show’s characters. To make this clear, it is useful to examine several screenshots from *The Expanse* that reveal this background environmental commentary.

Although the TV version of *The Expanse* largely tracks the books, there are nevertheless important differences. For example, Avasarala, who does not appear until the second novel of the series, is immediately present in the show. This was likely done for two reasons: first, to make the first season less tied to two white male point-of-view characters (Holden and Miller in the novel); and second, to add a character the show could follow on Earth, thus adding it as a major setting from the outset (it is notably absent in *Leviathan Wakes*). The show then synthesizes the
events of the novels into plausible scenarios for other characters that are not always
depicted in the books, but whose actions are nevertheless implied. Avasarala,
clearly, would have been present at the UN for the crises depicted in *Leviathan
Wakes*, even though the novel does not discuss her or events at the UN directly. The
show, on the other hand, does, giving the viewer more direct and varied views of
Earth’s ecological and environmental state through Avasarala’s eyes.

In the novels, particularly *Caliban’s War*, the UN headquarters is located in
The Hague—a reasonable choice, as the International Court of Justice and other UN
offices are located there, after all. In the show, however, the seat of Earth’s
government is based in New York City, site of the present-day UN building. The
switch from The Hague to New York was conceivably done for several reasons—
including making it more palatable to American viewers—but it also allows the
show to play with what is perhaps the world’s most recognized skyline. A pivotal
scene where Avasarala befriends Bobbie (which takes place at a bar in the books), is
shifted to the New York waterfront in the show. Bobbie—preoccupied with the
terraforming of Mars—wants to see Earth’s ocean, so she leaves the MCR embassy
and Avasarala covertly meets her there. (See Figure 15, page 252). In this scene,
Avasarala (Shohreh Aghdashloo) and Bobbie (Frankie Adams) look out over the
ocean while Cotyar (Nick E. Tarabay) stands guard. Any viewer remotely familiar
with New York knows that the structure behind them—a massive seawall—does not
currently exist. It towers over the characters and pervades the image (much like the
dust storm, tidal waves, and other natural threats in *Interstellar*), but they never
comment on its existence. Like global warming itself, it is simply a part of their
reality. In this way, *The Expanse* television series uses visuals to help convey its environmental messaging. Although the characters and humanity have learned to live with the results of climate change, they are still disastrous and both humankind and the planet are poorer for it. Earth’s entire economy, including the UN’s problematic but necessary system of basic support, is linked with the ecological and economic fallout tied to a world transformed by rising oceans and environmental ruin.

As with all space-based sf shows and films, *The Expanse* also takes advantage of its outer space setting to depict planets from orbit, including Earth. This vantage point plays with what Csicsery-Ronay, Jr., calls the science-fictional sublime, in other words, making humankind appear small in the face of an awesome and immense nature (and also linked to sf’s resonances with the Gothic genre). For Mars and the asteroids of the Belt and moons of the outer planets, this generally means showing human-made structures like domes and spaceports on their surfaces. For Earth, however, it means altering the planet’s current coastline to reflect centuries of global warming. (See Figure 16, page 252). This still, like the earlier image, reveals the show’s use of background visuals to make its environmental appeal. Here, the *Rocinante* orbits Earth. The well-known coastline of North America is dramatically altered by rising sea levels—huge swaths of Florida lie underwater, while major areas like Miami, Tampa, and Jacksonville appear to have been saved by seawalls like those protecting New York. Other lengths of coastline along the Atlantic also appear significantly farther inland than the present-day. Again, as in the first scene, no one in the show directly comments on the changes—to them it is simply the way
things are—but the show’s use of visuals nevertheless speaks for itself. The UN’s troubles in *The Expanse*—overpopulation, ecological degradation, severe unemployment, malaise, et cetera—are all linked to some extent to Earth’s environmentally imperiled condition. Although the planet’s bounty can still support the massive human population, one cannot help but ask how much better things would be without such problems.

The fourth season of *The Expanse* closely tracks the events of the fourth novel, *Cibola Burn*. As in the novel, the primary setting for this season is the exoplanet Ilus. Interestingly, unlike the CGI-based terrain of Pandora in *Avatar*, *The Expanse* relies on a very real location to serve as Ilus in the TV series. (See Figure 17, page 253). Seen here, an active quarry near Toronto serves as the show’s rendition of the exoplanet. Except for the alien ruins appearing in the foreground, the show’s executive producer Naren Shankar notes that “virtually no CGI work” was used in the creation of Ilus (Clark). Three things are of note here. First, as mentioned, a very Earthly location was used in the creation of Ilus. However, it is not a natural one, but a quarry, a constructed space. This is compelling vis-à-vis the use of CGI-landscapes in other sf films like *Avatar*, or the sublime views of Earth’s nature in Iceland to serve as a strand-in for the exoplanets of *Interstellar*. Instead, the quarry-setting of Ilus in *The Expanse* is both bleak and simultaneously mundane. Even the environmentally compromised Earth of the future appears more desirable than the desolation of Ilus. Second, at the same time, the quarry offers a constructed site for experimentation—a kind of literalizing of the allegorical heterotopian exoplanets in the series. Third, the show visually separates the events taking place beyond the
ring gate on Ilus—the allegorical space—from the action within the Sol system—the extrapolated future—by using a different aspect ratio for scenes set on the exoplanet. Sequences set on Ilus use the very wide anamorphic 2.39:1 aspect ratio, whereas other scenes in the series rely on the more conventional 16:9 format (Whalen). This transition, while subtle and rather seamless, nevertheless visually reinforces the differences between the exoplanet and other locales.

Jeff Bezos saved The Expanse (Snowden). Here lies a final paradox. Bezos, along with Elon Musk and others, has personally pushed for the privatization of space and the cosmic escapism seemingly endemic to the long 2010s. And certainly the science fictional and space opera elements of The Expanse (not to mention its excellent cast, writing, and special effects) likely appeal to Bezos personally. However, the core push at the heart of the series stands in sharp relief to Bezos’s space ambitions. Corey and his epic, I argue, do not advocate fleeing Earth to terraform Mars and settle the Belt, even though this forms the core of the series’ narrative. Instead, the novels and TV series advocate a diverse, heterotopian response to the failed utopias found within the storyworld. The Expanse and The Expanse both promote inclusivity, multiculturalism, conservation, the democratization of ideas and voices, and a new, more harmonious human-environment interaction. The best way to create a more livable future than the one envisioned by Corey is to work now towards change, keeping the options open for future generations. The Expanse argues for protecting and preserving our planet with a free, diverse human society, not fleeing it for the stars.

251
Figure 15

(The Expanse, “Cascade” 38:02)

Figure 16

(The Expanse, “New Terra” 8:33)
Figure 17

(The Expanse, “New Terra” 36:27)
Postscript

Space: The Final Frontier?

On October 13, 2021, Canadian actor William Shatner, best known for playing the original Captain James T. Kirk in Star Trek (1966–1969), departed Earth for outer space. Shatner’s molecules were not broken down and beamed up to the Enterprise via transporter, nor did he take a shuttlecraft. Instead, the actor hitched a ride to the edge of space (100 kilometers above sea level) on Jeff Bezos’s Blue Origin rocket. Reflecting on his experience, Shatner said:

The view of space is absolute blackness. There’s no twirling, shining stars, no moon, no galaxies 13.8 billion light years away. There is just black, ominous space. It suggests eternal cold and death. But looking back on Earth, you see this mote of dust that’s our resting place, this fortunate oasis in the solar system, for sure, and everywhere else we can see. It made me very conscious of how fragile and small this oasis is. With that, I am filled with great sadness over what I know to be such a terrible time we’re going to have if we don’t do something immediately about global warming. We must have hope that with action we can allay that. (Clash)

Shatner’s words are both iconic and ironic. The same man famously known for calling space “the final frontier” in his memorable monologue during every Star Trek episode’s opening credits, and who has now officially become an astronaut himself,
warns against humankind’s recent space obsession, instead noting the importance of focusing our attentions and efforts on Earth and its recent environmental perils. Bezos, by giving a free ride to Shatner (in what was definitely a brilliant marketing coup), also elevated an environmentalist voice in direct competition to his own cosmic escapist dreams. Perhaps this is why, as Shatner began to describe “the most profound experience [he] could imagine” upon landing, Bezos interrupted the veteran actor with, “Give me a champagne bottle! Come here. I want one!” (Spellberg Lustig). The billionaire then proceeded to talk over the actor and spray champagne, promptly ending his CNN interview, while Shatner peered ruefully at the earth (and Earth) beneath his feet.

Like Shatner’s turn from the headstrong Starfleet captain of his fictional past persona to the somber environmentalist of reality today, many examples of the sf genre of the prior decade also reveal unexpected, counterintuitive themes and elements upon deeper inspection and reflection. In this study, I consider a small subset and snapshot of the sf genre over the course of a protracted decade. The trends revealed by a counterintuitive, against-the-grain analysis of The Martian, Avatar, Interstellar, and The Expanse are clear, but they do not tell the whole story, only a small piece of a larger puzzle. A range of other texts and media—from other novels and films to video games as well—also offer the potential to tell a more complete story of the greater trends of sf over the course of the long 2010s. An

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85 The negative environmental impact of such useless space launches as Shatner’s cannot be ignored, but who among us would refuse a free ticket for a brief ride to outer space if offered?
86 Never one to miss a marketing opportunity, Bezos’s Amazon released a tie-in documentary of Shatner’s spaceflight entitled Shatner in Space (2021).
expanded version of this study would benefit from considering additional examples and case studies to present a more complete survey of the genre in the early twenty-first century.

In an expanded version of this project, I would add additional chapters focusing on other categories of sf places envisioned during the long 2010s, starting with the decade’s fascination with postapocalyptic environments. Putting postapocalyptic narratives, like Cormac McCarthy’s *The Road* (2006), for example, and its 2009 movie adaptation, into conversation with the sf works examined in this study, especially the related yet distinct dystopian films, would prove enlightening and revealing. McCarthy’s novel offers a bleak postapocalyptic odyssey through an environmentally ravaged Earth with no functioning biosphere. The origins of the devastation imagined in the novel remain enigmatic and unanswered, but climate change or some other global environmental catastrophe hangs in the background. A review in *The Guardian* compared *The Road* to Carson’s *Silent Spring* and called it “the most important environmental book ever written” (Monbiot). Other postapocalyptic works, which have always been a popular sf subgenre but seemed to explode during the 2010s, and which would pair well with *The Road*, include George Miller’s *Mad Max: Fury Road* (2015), the fourth installment in his long-running series, and Aaron Guzikowski’s HBO series *Raised by Wolves* (2020–2022). All three works are set on environmentally devasted future iterations of Earth, but nevertheless possess clear links between their imagined futures and contemporary social ills, and would prove useful in an expanded version of this project.
On the opposite side of the same coin, several works of the 2010s imagine verdant, arcadian spaces that offer an antithesis to postapocalyptic wastes and deserts. Playing with the notion of the “ecotopia,” or “environmental place,” coined by Ernest Callenbach in his infamous 1975 novel of the same name, works like Jeff VanderMeer’s *Southern Reach* trilogy (2014), Alex Garland’s motion picture adaptation *Annihilation* (2018), and Zeek Earl and Chris Caldwell’s *Prospect* (2018), all portray abundant, immersive ecosystems on a future Earth or in outer space. These books and films all imagine lush, fictional places where nature reclaims space or overwhelms humanity with its sheer variety and plenty. The subtext of these works, which feature thriving forests, jungles, marshes, and other landscapes almost overrun with life, implicitly gestures toward the devastation and destruction of such ecosystems on Earth today. These ecotopias serve as compelling counterpoints to not only postapocalyptic wastelands, but the atopian, dystopian, utopian, and heterotopian spaces portrayed in the texts and films already considered in this project. A discussion of the *Southern Reach* trilogy, *Annihilation*, and *Prospect* would also prove fruitful vis-à-vis *Avatar*—not only do these works all feature sylvan landscapes on both alien planets and Earth, these fictional woodlands and forest-worlds implicitly call to mind allusions to Yggdrasil, the Garden of Eden, and its fateful Tree of Life and Tree of the Knowledge of Good and Evil.

*Avatar*, as noted in Chapter 2, became known for not only its overt environmental and anticolonialist calls-to-arms, it also unexpectedly seduced many viewers with its vibrant CGI imaginary world. Many such viewers became depressed after comparing the virtual reality of Pandora to their bleak reality on Earth today.
Although an unintentional and metatextual result of *Avatar* and its blockbuster success, other works of the 2010s directly confront the idea of fleeing Earth for an idealized virtual space—perhaps a “computopia,” or “computerized place.” In Ernest Cline’s debut novel *Ready Player One* (2011), Steven Spielberg’s 2018 movie version, and its sequel *Ready Player Two* (2020), Cline imagines a cyberpunk future where humanity leads a double-life on a bleak, overpopulated Earth and within the crisp, kaleidoscopic dreamworld of the OASIS (Ontologically Anthropocentric Sensory Immersive Simulation). The narratives of Cline’s novels and Spielberg’s film present life in the OASIS as preferable to the grim lives and circumstances of their characters. Moreover, an intriguing transformation occurs between not only *Ready Player One* in fiction and film, like the case of Andy Weir’s and Ridley Scott’s differing versions of *The Martian* discussed in Chapter 1, but also between Cline’s debut novel and its sequel. Due in part to their respective publication dates near the outset and conclusion of the long 2010s, *Ready Player One* and *Ready Player Two* offer differing themes, including responses and reconsiderations within the sequel to assumptions present in the original novel. In this way, Cline’s texts offer competing snapshots of different moments in time within the sf of the prior decade, especially the notion of fleeing reality for a virtual alternative.

Finally, although there are other types of theoretical places portrayed in contemporary sf which would prove fruitful to include in an expanded version of this project, there remain other works which would pair well in discussion with the works and places already considered here. First, in my discussion of atopias focused almost solely on *The Martian*, I would also consider Alfonso Cuarón’s sf thriller
Gravity (2013), which portrays the atopia of outer space—the near-Earth orbit where Dr. Ryan Stone (Sandra Bullock) must briefly survive after her NASA shuttle is destroyed—as a deadly, unappealing place for humankind to venture. Weir’s recent Project Hail Mary (2021) would also present an interesting juxtaposition to his earlier novel. As a companion piece to my second chapter on sf dystopias in film, I would add a chapter considering sf dystopias in the literature of the 2010s. Ian McDonald’s Luna trilogy, comprising Luna: New Moon (2015), Luna: Wolf Moon (2017), and Luna: Moon Rising (2019), which features the Machiavellian future of life of a corporate, feudal Moon colony, and Adrian Tchaikovsky’s sf diptych series, Children of Time (2015) and Children of Ruin (2019), which follows a human exodus to space following Earth’s environmental ruin in the distant future, offer compelling examples of sf dystopias published during the 2010s. Lastly, as an intriguing counterpoint to the failed utopias and heterotopian exoplanets portrayed in The Expanse, I would add a consideration of the recent revival series Star Trek: Picard (2020–2023). Unlike many prior entries in the Star Trek canon, the return of Jean-Luc Picard (Patrick Stewart) in the late 2010s and 2020s drops the franchise’s profound optimism for bleak realpolitik and realism. The episode “Nepenthe,” in particular, imagines a diverse, natural exoplanet as a site of rejuvenation and renewal, with potential points of comparison to not only The Expanse’s fictional heterotopian exoplanets, but the ecotopian worlds imagined in the Southern Reach trilogy and Prospect as well.

This study, as it stands, examines a trend of sf over the course of the long 2010s by close reading and analyzing a limited subset of works from the prior
decade. By bringing additional books, movies, and other multimedia into the conversation with my current analysis, this project can be bolstered to offer a more comprehensive survey of the trends of the genre during the early twenty-first century. Expanding the number and type of works considered in this study would help further reveal that the counterintuitive, paradoxical trends and motifs I identify are not limited to a small subset of texts, but reveal a larger trend in the genre and its environmental and societal themes related to the world today. The long 2010s proved to be a decade overwhelmed in many respects by environmental fatalism and the cosmic escapist dreams proposed by figures like Bezos, Elon Musk, Robert Zubrin, Stephen Hawking, and others. However, many sf texts, films, and other media produced during the decade often point in paradoxical, frequently ironic, and often counterintuitive directions. The examples of sf I analyze in this study, rather than revelling in humankind’s recent fascination with Mars and the stars, as one would generally expect from the genre, instead offer a different, competing vision. Numerous examples of popular sf of the prior decade warn that humankind should focus our attentions and our efforts on our own troubled Blue Planet, rather than pining for an improbable new home on Mars or elsewhere in outer space. Unexpectedly, many sf narratives about exploring far off planets, colonizing new worlds, or fleeing the troubles of our Blue Planet do not actually argue in favor of such actions. Instead, a recurring theme of sf of the 2010s is that humankind should stay home on Earth and focus on revitalizing our planet and repairing our human societies and selves.
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