[Source: Ameel, Lieven: "Fraught Fictionality in Narratives of Future Catastrophe." *Narrative* 29:3, 2021, 355-373.]

[Note: page numbers are aligned with the page numbers as they appear in the published article.]

Lieven Ameel

Fraught Fictionality in Narratives of Future Catastrophe

Abstract

In our future-oriented era, future visions have become increasingly important for shaping policy and public awareness. How is fictionality as rhetorical mode used in non-literary future visions, and how are signposts of fiction instrumental—or detrimental—to conveying pathways to the future, in view of forecasted environmental devastation and radical climate change? How does the temporal mode of the scenario (which, describing the future, has as yet has no truth-value in the actual world) complicate our thinking of fictionality? This article examines fictionality in a selection of non-literary narratives of future catastrophe: *The Effects of Nuclear War* (1979), *Storms of My Grandchildren* (2009), *The End of Western Civilization* (2014), and *The Water Will Come* (2017). I develop the idea of "fraught fictionality" to denote the kind of uneasy fictionality found in future scenarios, burdened by its inclusion within a textual genre that is geared toward policy-making and anticipation.

Keywords

fiction, fraught fictionality, fictionality, future, scenario

Biographical Statement

Lieven Ameel is senior lecturer in Comparative Literature at the University of Tampere, Finland. He holds a PhD in Finnish Literature and in Comparative Literature. He is one of the editors of the Palgrave Series in Literary Urban Studies. His research interests include narratives in policy and planning, urban futures, and narrated experiences of space.

Introduction

Jeff Goodell's *The Water Will Come* (2017), a journalistic examination of rising waters and their global impact, opens with a prologue entitled "Atlantis," describing a flooded 2037 Miami:

After the hurricane hit Miami in 2037, a foot of sand covered the famous bow-tie floor in the lobby of the Fontainebleau Hotel in Miami Beach. A dead manatee floated in the pool where Elvis had once swum. [...] The storm knocked out the wastewater-treatment plant on Virginia Key, forcing the city to dump hundreds of millions of gallons of raw sewage into Biscayne Bay. Tampons and condoms littered the beaches, and the stench of human excrement stoked fears of cholera. [...]

The president, of course, said that Miami would be back, that Americans did not give up, that the city would be rebuilt better and stronger than it had been before. But it was clear to those not fooling themselves that this storm was the beginning of the end of Miami as a booming twenty-first-century city. (5)¹

This short, imaginative piece (three pages in full) describing a speculative future disaster is symptomatic for how traditionally nonfictional genres, such as journalistic texts and policy reports, incorporate speculative stories for a range of effects and intended purposes. The prologue of Goodell's book proved to be particularly popular with the general public: it is frequently reprinted, often as teaser for the full book, and in reviews, the element of fictionality in the excerpt tends to be foregrounded. *The New York Times* notes that Goodell "opens 'The Water Will Come' with a fictional hurricane whipping through Miami in 2037" (Senior); an online review notes that the book's "opening serves up a bit of cli-fi (climate change-inspired dystopian science fiction)" (Ostrander); *USA Today* writes that the prologue "creates a new literary genre of speculative non-fiction" (Meyer).

But "Atlantis" also raises questions about the status of fiction and fictionality itself. What is the relation of this text to "fiction," and what does the purported "fictional" element add to an otherwise referential narrative? How does the temporal mode of future narratives complicate the way we think about fictionality and about the affordances of literary and non-literary genres for future storytelling? Such questions have gained added weight in an era when issues of inequality, power, and accountability are increasingly played out in the shadow of a future plagued by environmental devastation and radical climate change.

This article examines fictionality in a selection of non-literary narratives of future catastrophe. I am particularly interested in the rhetorical purpose of speculative sections such as Goodell's "Atlantis," which are embedded in larger nonfictional texts, and in the way in which the (supposed) fictionality of such local parts is signalled within the communicative context and by way of markers of fictionality (see, e.g., Cohn; Schaeffer; and Skov Nielsen et al., "Ten Theses"). I will start out with a brief examination of fictionality and what I call "fraught fictionality" with reference to Goodell's

"Atlantis." An examination of the Cold War report *The Effects of Nuclear War* (1979) will contextualize storytelling strategies in future scenarios and their rootedness in military forecasting. I will then discuss two recent examples of future visions with an environmental focus: James Hansen's *Storms of My Grandchildren* (2009) and Naomi Oreskes and Erik M. Conway's *The End of Western Civilization* (2014). I develop the idea of "fraught fictionality" to denote the kind of uneasy fictionality used in a number of future narratives and burdened by its inclusion within a textual genre that is geared toward policy-making, forecasting, and anticipation. "Fraught" is understood here as informed by the full range of meanings of the word, as outlined in the OED: it may denote what is "laden, equipped"; something that is "big' with the promise or menace of"; and it has also a connotation of "distressed; distressing" (OED). What defines "fraught fictional" texts is how they are "laden": they are "equipped" to convey meanings and to accomplish purposes that are set out in the main texts they are appended to, and they are "burdened" by their insertion within a textual genre aimed at policy-making and at shaping public awareness. More often than not, their task is to convey a sense of menace, to give added weight to a distressing specter of future possibility.

Fiction, Fictionality, and "Atlantis"

In my treatment of fictionality, I follow Richard Walsh, Simona Zetterberg Gjerlevsen, Henrik Skov Nielsen, James Phelan, and others in characterizing it as a "rhetorical communicative mode" (Zetterberg Gjerlevsen; Walsh; Skov Nielsen et al., "Ten Theses"). This approach sees fictionality as a property of a communicative situation, rather than as a set of distinguished properties of a text. Fictionality as communicative strategy is also predicated on the abilities of the speaker/writer to understand and apply code-switching between fictional and nonfictional utterances, and is dependent on the abilities of the audience to recognize such code-switching. Since I am examining a particularly shape-shifting textual genre—non-literary narratives set in future storyworlds—I am also interested in the kinds of signals used to indicate the shift away from nonfictionality. In the texts discussed here, such signals can be thought of as markers of "degrees of fictionality" (Skov Nielsen et al., "Fictionality"); they include some of the signposts or indices of fictionality as outlined by Dorrit Cohn or Jean-Marie Schaeffer, but they also include features such as the representation of qualia and the rhetorical use of imaginative naming.

Fictionality, in the rhetorical approach, is "not just regarded a term attributed to fictional narratives such as novels and short stories; nor is it [...] defined in opposition to truth. Rather, fictionality [...] is understood as a means to communicate what is invented" (Zetterberg Gjerlevsen); it constitutes the "intentional use of invented stories and scenarios" (Skov Nielsen et al., "Ten Theses" 62), and can be defined as "intentionally signalled invention in communication" (Zetterberg Gjerlevsen and Skov Nielsen). On the basis of this definition, Goodell's "Atlantis" would at first sight clearly seem to belong within this category: it describes an invented storyworld, and clearly signposts it as such ("This is, of course, merely one possible vision of the future" [Goodell 8]).

But a fictional narrative is understood not only as a narrative that communicates to the reader that the story it tells is invented. Fictionality also marks itself as not having truth value in the real world; it invites the reader "to assume (among other things) that it is not making referential claims" (Skov Nielsen et al., "Ten Theses" 68). In Goodell's book, however, while some of the specific details of the storyworld are clearly meant to be read as invented, when it comes to the more general attributes of the imagined future, claims to referential truthfulness are at the heart of the text's ethos. The prologue explicitly argues that it is part of a book that urgently aims to be truthful to the real world: "In this book, I want to tell a *true* story about the future we are creating for ourselves, our children, and our grandchildren" (8; my emphasis). Here we are already at the heart of the incongruity of "fraught fictionality"—to which I will return at more length below—its genuine insistence on wanting to tell a "*true* story" while claiming to produce fiction.

An important aspect for how texts like Goodell's prologue complicate thinking about fictionality is its storyworld's location in a possible future. "Atlantis" describes events that have no truth value in the real world at the time of writing, and the same can be said of much of the rest of the book, which deals with future developments that by definition cannot yet be confirmed. And yet describing a not-yet-actualized reality does not make the content or ethos of a text anything less "real" or true-to-life, as policy makers, urban planners, and International Panel on Climate Change (IPCC) panelists will be eager to point out. Following Bertrand de Jouvenel—one of the founding figures of futures studies—texts that describe the future cannot be accurately described by using the dichotomy "fact—fiction", since such texts are dealing with a different category altogether: *futura*, or future facts (55). While future narratives have no truth-value in the actual world, they may differ considerably in the degree of urgency with which they relate an imagined future to an actual present. If readers contemporary with the publication of a text are presented as being able to influence, or prepare for, possible or probable futures—as in IPCC assessment reports or indeed Goodell's *The Water Will Come*—the storyworld has a particularly high degree of urgency.

Throughout the global context of Goodell's *The Water Will Come*, a high degree of referentiality and urgency is produced by a range of strategies: lengthy discussions with scientists, experts, and stakeholders; the enumeration of quantifiable data and scientific facts that feed into forecasting for possible futures; and the reproduction of close-up images of archaeological finds and soil samples, among others. Set against the global text, "Atlantis" signals its inventedness in a number of ways—most explicitly by the words that immediately follow it ("This is, of course, merely one possible vision of the future" [8]), but also by way of its textual features, which to the reader constitute important means to recognize the code-switching, within one and the same book, from nonfictionality to fictionality. In part, such signals can be approached in terms of degrees of fictionality, for example by looking at how elaborate the imagined storyworld in the text is (see Skov Nielsen et al., "Fictionality" 104). In the global text, future visions are vague, constituting mere sketches of the possible terrain. In "Atlantis," there is considerable detail, with an immediate focus on a "dead manatee floated in the pool where Elvis had once swum." Looking at the text more closely, how do the

signals employed by Goodell fit the purposes of the text, and to what extent are they aligned with established markers of fictionality in genre fiction?

The most straightforward signpost of fictionality would simply be a written sign that says "fiction," or the subtitle "A Novel" or the like. But as we will see in some detail in the case of Oreskes and Conwell's The End of Western Civilization, this is far from a reliable indicator of fictionality (see also Skov Nielsen et al., "Ten Theses" 67). In the more narrow sense of generic fiction, one signpost of fictionality that has been argued to be particularly important (especially for distinguishing between literary texts and scientific or journalistic reports) is "the presentation of consciousness" (Cohn 109–12, 130–31). But Goodell's "Atlantis" does not contain descriptions of characters' inner thoughts, and I will show below that the same holds true for several other examples of what I call "fraught fictionality." Even a statement such as "it was clear to those not fooling themselves" in the opening scene does not have to refer to privileged authorial knowledge of characters' inner thoughts, but can be understood rather as an indication of general knowledge about a person's inner thoughts gained by outward observation. Not only does the text not showcase characters' minds, it features no individual characters—apart from the US president—but tends to speak in highly general terms, and in third person plural: "those not fooling themselves"; "people"; "developers"; "lawyers." Drawing on James Phelan's rhetorical approach to the study of literary characters, it is clear that in "Atlantis" the thematic components—the "attributes, taken individually or collectively" that are "viewed as vehicles to express ideas or as representative of a larger class than the individual character" (Phelan 12; see also Clark and Phelan 171–85)—are foregrounded to the detriment of the two other components (synthetic and mimetic). As will become clear from the other examples below, this foregrounding of characters' thematic component is shared by all instances of fraught fictionality examined here.

Similarly, the text scores low on several of the signposts of fictionality as summed up by Jean-Marie Schaeffer in *Why Fiction?* It does not, for example, showcase "free indirect discourse," "massive use of dialogue," or use of "spatial deictics indexed to third parties" (Schaeffer 238–239; see also Zetterberg Gjerlevsen). But there are some elements that do provide a minor nod in the direction of fictional narrative strategies, such as the ostensible "doubling of the narrating instance into author and narrator" (Cohn) and appearances of the "detemporalization of the preterite" (Schaeffer), for example in the enumeration of "covered," "knocked," "flooded," and "floated" (Goodell 5). It should be noted, however, that the "detemporalization of the preterite" is not merely an index of fictionality but rather a feature that is coincidentally shared by narratives set in a future and conventional fictional narratives—it is one particular example of how future narratives complicate thinking on fictionality's indices.

"Atlantis" provides some examples of features that are typical not of *fictionality*, but of *narrative* more generally, such as suggestions of "qualia"—the "sense of 'what it is like' for someone or something to have a particular experience" (Herman 14)—for example in the mention of the "stench of human excrement" (Goodell 5). This last example may serve as one indication of what "fraught fictional" texts implicitly aim to achieve: to provide subjective, experiential detail into "what it feels like," as compared to the more abstract, quantitative, impersonal features traditionally associated

with nonfictional genres (cf. Schaeffer 240, on "new journalism"). This feature of the text has a clear function in view of the text's rhetorical purpose, which is to bring predicted future catastrophe closer to home both in terms of embodied experience and in terms of recognizable cultural frames of reference. Arguably the most imaginatively rhetorical feature of the text is its title, "Atlantis," suggesting imaginative links between future flooding along the US coast and one of the most popular and most enduring images of Western popular culture, thereby establishing implications of national or global hubris in the face of vengeful natural forces.

On the basis of this brief examination of Goodell's "Atlantis," some provisional observations can be drawn up about what distinguishes "fraught fictionality," the forced, over-burdened inclusion of features of literary storytelling within nonfictional visions of an alternative or future world. Some of the most conventional benchmarks of generic fiction, such as privileged access to people's minds and an insistence on non-referentiality, tend to be largely lacking. Instead, what stands out is the aim to provide experiential information: the "what it feels like" of a future or possible world whose attributes lend particular urgency to the referential world of the author and intended readers. The aim to convey qualia is intimately bound up with the didactic and rhetorical purposes of "fraught fictionality": to nudge the readership towards particular insights and particular courses of action. I will argue that among the features of "fraught fictionality" are also a highly limited set of stock characters; the privileging of a distancing gaze or perspective; and the impersonality of the narration, with a focus on third-person plural.

The Persuasive Mission of Cold War Future Scenarios

The advent of future scenarios as a separate formalized textual genre, used for didactic purposes and with the aim to shape public awareness and policy, coincides largely with the first decades of the Cold War. The story of the involvement of Herman Kahn and others at institutes such as the RAND corporation and the Houston Institute in the development of futures studies during the 1950s and 1960s has been told at length elsewhere (see, e.g., Bell, *Foundations* 60–68); in France, Bertrand de Jouvenel and others around the *Futuribles* group were simultaneously advancing tools for forecasting the future. In addition to planetary military strategy, energy transformations (with fossil fuels as a central concern) were at the heart of the development of futures studies, with Royal Dutch Shell in an important role (see, e.g., Mäntysalo and Grisakov).

Within futures studies, scenarios typically appear in plural, as sets of alternative visions of the future that illustrate various possible future directions, and they are often drawn up on the basis of a range of sophisticated methods, such as the Delphi method (a thematic survey study with repetitive questioning of an expert panel) (Bell, *Foundations* 261–72). While the texts discussed here do not conform to that model of the scenario, several elements of the scenario, notably its use of imaginative features of storytelling as part of a persuasive mission, connect the future scenario with other examples of non-literary future narratives. From the start, "fictional" elements were

part of scenarios to "help make those [possible] futures more real, such as [with] fictional news articles, personas, websites, videos, or other artefacts from those worlds" (Wong and Khovanskaya 191). This view of the importance of "fictional" elements is aligned with fictionality's ability to provide "a double exposure of imagined and real" (Skov Nielsen et al., "Ten Theses" 68). This double exposure is acted out by inviting the reader to map their reading of an embedded fictive text onto their reading of the global nonfictional book within which it is set, and then to consider its relevance for urgent real-world questions. In future scenarios, an added sense of enlivened reality or condensed multi-dimensional perspective by way of vignettes (or "creative fictional prototypes" [Rhisiart 16]) is meant to help accomplish scenarios' key purposes: to identify agency and to enable people to act more responsibly—after all, "People cannot become competent, effective, and responsible actors unless they know what the consequences of their acts will be" (Bell, "Making" 328). Below, I will first outline "fraught fictionality" and its implications for the didactic purposes of future visions in the light of a 1979 Cold War policy report that featured a "fictional" annexation. The subsequent and final section of my paper will show that similar features of "fraught fictionality" can also be found in more contemporary, environmentally themed texts.

"Charlottesville" and The Effect of Nuclear War

The Effect of Nuclear War is a report issued by the US Office for Technology Assessment (OTA) in 1979 in response to a request from the Senate Committee on Foreign Relations. The 154-page text was aimed at policy makers as well as the general public, with the express purpose to provide better insights into the foreseeable effects of a possible nuclear exchange between the US and the USSR. The stated aim of the report was to make what is "abstract" about possible nuclear war into "more comprehensible terms" (iii). As part of that aim, a "work of fiction" was commissioned from a consultant, Nan Randall, and appended to the report:

In an effort to provide a more concrete understanding of the situation which survivors of a nuclear war would face, OTA commissioned the following work of fiction. It presents one among many possibilities [...]. It does provide detail which adds a dimension to the more abstract analysis presented in the body of the report. (124)

The text, titled "Charlottesville" after its setting in the Virginia city, struck a chord with contemporary readers. In the *New Scientist* of April 3, 1980, a reviewer wrote that the "fictional account by Nan Randall" was "by far the most telling part of *The Effects of Nuclear War*" (Barnaby 38). It was occasionally referred to and reprinted in amended form (e.g., in *The Fitchburg State Strobe*—a small university newspaper—on April 22, 1982). However, little previous research has given attention to Randall's text or to its "fictional" characteristics, apart from a brief mention in Andrew Ross's *Strange Weather* (see below). What are the characteristics of this commissioned text appended to the OTA report? And what kinds of foundations does it lay out for later applications of "fraught fictionality" embedded in more recent nonfictional future visions?

A first and highly conspicuous feature of Randall's text is the lack of any "theory of mind" (Zunshine)—no characters mind-reading each other, and no opportunity for the reader to participate in considering characters' state of mind. There are no events or actions in the story that are motivated by what particular characters think or feel; in fact, individual characters are entirely absent from the storyworld. The only exception is the president of the US, as in the following excerpt:

As evidence reached the U.S. President's desk that a sizable number of Americans were deserting the major cities for what they perceived to be safety in the rural areas, he considered ordering a general evacuation. (124)

Even in this quote, we are far removed from any tangible insights into the functioning of this president's reasoning or feelings. The above sentence does not have to refer to mind; it could also be a summary of deliberations or discussions with White House staff. Similar to "Atlantis," the characters in "Charlottesville" are composed for the most part of thematic components, foregrounding their function as "representative entities" (Phelan 13). The US president in this quote is not so much a particular character as an allegorical figure meant to symbolize the imaginary authority in charge in the future world. Singling out the president in this way also locates future agency firmly away from everyday experience, and confines that agency to a narrow circle of power. Significant is also how the text mentions the "President's desk" rather than the president himself, in a shift from singular human character to abstract entity that is typical of the text's impersonal manner of presenting events.

The text as a whole does not follow any one single character, but instead presents experience in highly generalized terms. It tends to use the passive voice or an impersonal third-person plural. In this respect, the narrator's voice is a virtual extension of the impassionate narrative voice of the OTA report as a whole. The following excerpts are representative of the text's use of passive voice and of third-person narration:

Some time later *it was learned* that more than 4,000 megatons (Mt) had destroyed military and industrial targets, killing close to 100 million people in the United States. (125; my emphasis) *Among the majority of the shelter residents*, the out-of-town refugees being an exception, there was a sense of relief, a sense that they had been among the lucky ones of this world. They had survived. (126; my emphasis)

For most people, the obvious emotional crises—grief at leaving behind a pet, anxiety at being unable to locate a family member or relative—were suppressed by the overwhelming fear of the impending attack. (125; my emphasis)

These examples more closely resemble how a reporter or researcher might write a generalizing summary on the basis of numerous interviews, rather than how an individual would describe their immediate experiences. The manner of representation is far removed from narratological indices of fictionality, but also from more conventional understandings of how literary fiction functions. If literary fiction can be understood (loosely paraphrasing Aristotle in the *Poetics*) as the presentation of

general truths on the basis of individual, invented characters and in a poetic language, then "Charlottesville" would seem to be doing the opposite: using highly schematized, plural characters, with foregrounded thematic components, to present a very particular possible future in matter-of-fact language.

In the absence of identifiable characters, plotlines, or events motivated by characters' theory of mind, other rhetorical elements gain added weight. One particular element stands out: the title and toponym of Charlottesville, and the allusions activated around this setting. Both the home of Thomas Jefferson and the university he founded can be found in Charlottesville, and both stand as monuments in the built environment to Jeffersonian ideals, combining neoclassical form with agrarian republicanism. This produces important implications for an idealized post-apocalyptic world based on particular American ideals aligned with antimodernity and anti-urbanity. The town is described as follows in Nan Randall's text:

Charlottesville, the small but elegant center of learning, culture, and trade in central Virginia, was not hit either. This monument to the mind and manner of Jefferson retained its status as a kind of genteel sanctuary, momentarily immune to the disaster that had leveled the cities of the Nation. (125)

As Andrew Ross argues in *Strange Weather*, the author of "Charlottesville" "presents agrarianism, of the sort that Jefferson espoused, as one of the most effective, survivalist ways of arresting society's technological retrogression to a late medieval infrastructure" (142).

Summarizing, "Charlottesville" is an example of "fictionality [. . .] subordinate to nonfictive purposes" (Skov Nielsen et al., "Ten Theses" 67): a text that is explicitly flagged up as recounting an invented story and set within a global nonfiction. Examining "Charlottesville" in terms of its degrees of fictionality and the elaborateness of its invention, it becomes clear that the text offers little in the way of conventional markers of fictionality. Rather than providing privileged insights into personal experiences and minds, it presents a future world through highly impersonal presentation, rendered in the passive voice or third-person plural. In the way it frames the impact of nuclear war on particular actors and settings, "Charlottesville" lays out a limited range for agency or for legal, military, and political action. In its focus on the US president as a pivotal decision-maker —a focus that can also be found in Goodell's "Atlantis"—
"Charlottesville" presumes a highly restricted framework for meaningful action. In addition to this, the events in "Charlottesville" evolve along particular ideological lines, with a focus on the "genteel" and "learned" community in a provincial city that is presented as a clear counterpoint to the dead end of the East Coast cities.

"In the Year 2525" and Storms of My Grandchildren

If the threat of devastating nuclear war was the prime doomsday scenario during the Cold War, environmental concerns have taken over the baton in the twenty-first century. The interest in questions of persuasion and storytelling in environmental futures has gained added weight in view of what has become a recurring cause for wonder and concern: the discrepancy between the increasingly alarming forecasts in scientific reports and the media, on the one hand, and inaction both on a political and

personal level, on the other. This has coincided with a call to consider alternative forms of communication, including fictional storytelling. Lawrence Buell, Amitav Ghosh, and others have called attention to how the environmental and climate crisis is also a "crisis of the imagination" (Buell 2; Ghosh 9), with imaginative and discursive forms of knowledge in a potentially pivotal role. Two texts by scientists who tried their hand at alternative forms of science communication are examined here for how they use "fraught fictionality": James Hansen's *Storm of My Grandchildren* and Naomi Oreskes and Eric Conwell's *The Collapse of Western Civilization: A View from the Future*. Both books explicitly use what they call "fictional" elements. In both cases, such elements have received a mixed reception. Alexa Weik von Mossner argues that Hansen "tries to do exactly what [Dipesh] Chakrabarty [in "Postcolonial Studies and the Challenge of Climate Change"] suggests fiction might be able to do, namely 'extend our understanding to those who in future may suffer the impact of the geophysical force that is the human'" (85). Unfortunately, in her view, "Hansen's science-fiction story ends up being so far-fetched and its protagonists so bloodless that it seems unlikely that it will engage readers' imaginations and emotions in the intended way" (85). But what does it mean that protagonists are "bloodless"? And, while Weik von Mossner calls it a "fictional narrative" (86), how "fictional" is Hansen's story to begin with?

Storms of My Grandchildren is a nonfiction book published by climate scientist James Hansen in 2009. Like Goodell's *The Water Will Come*, it asserts repeatedly that it deals with true-to-life developments. The subtitle of the book hammers home the point of urgent referentiality, announcing the reader will get "the truth about the coming climate catastrophe and our last chance to save humanity." Similar to the 1979 OTA report, *Storms of My Grandchildren* includes an imaginative aside, entitled "In the Year 2525," appended to the main body with the express aim to add another dimension to abstract data—a local fictionality that is subordinated to the rhetorical purposes of the global text. Hansen explains these purposes as follows:

[...] How to portray the horror of that [future] devastation in a way beyond graphs and numbers and phrases we have heard before, like "climate disaster"? Even though science fiction isn't my area of expertise, I use the following scenario as a clarion call. I *must try* to make clear the ultimate consequences, if we push the climate system beyond tipping points, beyond the point of no return. (237; my emphasis)

Important in this quote is also the moral imperative of the author: he *must* tell the story, because of its consequences in the real world. There is not only the insistence on the fundamental true-to-life characteristics of the storyworld, but also on the moral implications of knowledge gained from these characteristics. The pragmatic emphasis on the real-world consequences, and the deadly seriousness, of "In the Year 2525" is most explicit in the sentence immediately subsequent to the "fictional" narrative: "The above scenario—with a devastated, sweltering Earth purged of life—may read like far-fetched science fiction. Yet its central hypothesis is a tragic *certainty*" (244; my emphasis).

In addition to the sincere pragmatic frame, two features stand out when reading Hansen's text: the non-human perspective (which is that of an alien race, the "claronians," who have sent a mission to Earth to escape an environmental disaster of their own); and the theatrical dialogue which dominates much of the narration from the opening scene onward:

"It's not Earth! It's not Earth!"

"What do you mean it's not Earth?" (237)²

The extraterrestrial theme alerts the reader that this is a fictional text, and to a certain extent the dramatic dialogue, too, conforms to several signposts of fictionality, even without the aliens: there is "massive use of dialogue which transgresses the boundaries for what it would be possible to account for in non-fictional discourse" and the "use of verbs of situation referring to events distant in time" (Schaeffer 238–39). There is also a clear detemporalization of verb forms, but as we have seen above, this can be seen as merely a feature of future narratives rather than an index of fictionality. There are no verbs of interior processes, at least not to describe the thoughts or feelings of particular individuals. The descriptive sentences in the text typically utilize impersonal, third-person plural:

They [the claronians] had long realized the need to keep both the amount of sunlight and the atmospheric composition in the proper ranges [. . .] (239)

Similar to "Charlottesville," Hansen's text is defined by its focus on third-person plural narration. There is an instance of free indirect discourse—a conventional hallmark of literary fiction, although it can also be found in nonfiction—but here again, the third-person plural is used: "If only they could succeed in getting their civilization to Earth" (240). The characters' function in "In the Year 2525" is predominantly thematic, with the claronians representing the idea of an imagined outsider looking at future Earth, but also representing a generalized future gaze looking back at the contemporary age of possibility which Hansen wants to hold up to his readers. For only one brief moment, the reader gains access to the personal perspective of a specific character, the pilot Spud, as he braces for impact with Earth at a location that once was Washington: "His eyes narrowed and his muscles tightened as he prepared for impact" (244).

If the text scores low on markers of fictionality, it nevertheless displays a number of fascinating rhetorical strategies. One of these is the letter from the future as device to insinuate the perspective of future generations; in this case, the letter is left by an American colony on Mars, describing humankind's pathway to destruction: "[On Mars] the Americans had left detailed documentation of the twenty-first century. The documentation provided [...] the complete story of how everything had gone so wrong on the perfect planet" (242). The trope is aligned with that of future readers in contemporary climate fiction (Vermeulen), and also with the "preoccupation with anticipated memory and preliminary or proleptic mourning evident in fictional future histories of climate change" (Craps 479). A second rhetorical trope—which similarly relies on a distancing strategy in order to provide insights into the future—is the view of the planet from space, here as seen by the claronians when they first gaze on a lifeless Earth in the opening lines of the text. It provides a powerful juxtaposition with the iconic image of the "Blue Marble" photo taken by Apollo 17 astronauts in

1972, which has been seen as one of the catalysts of the environmental movement (Patton). It is the ultimate panorama, and as such the exact opposite of what qualia and grounded, internalized perspectives of particular situations in literary fiction may provide (see Ameel).

But there are other intriguing features. The name of the spaceship is "Mayflower II" (237), which indicates a focus on an imagined US audience in how the text utilizes American foundational myths that have strongly Puritan undercurrents, as well as connotations of American exceptionalism, in a way not dissimilar to how Jeffersonian ideals were used in the OTA report from 1979. The central position of the US in the imagined future is amplified in other respects, too: the claronians learn English (rather than, say, Chinese, Spanish, or Navajo); they use American expressions; and when they look for people to blame, they point to American political institutions (243). Similar to the examples of "fraught fictionality" discussed above, the key circle of agency is confined to Washington, something which is in stark contrast to other parts of Hansen's book, which emphasizes international cooperation and the role of a range of countries and actors.

The Collapse of Western Civilization

One final text examined here as an example of "fraught fictionality" is Naomi Oreskes and Erik Conway's *The Collapse of Western Civilization: A View from the Future*. It is similar to Goodell's "Atlantis" and to Hansen's "In the Year 2525" in that it purports (as it makes evident in its paratexts; see, e.g., Oreskes and Conway 65–67) to be a vision of the future that draws on communicative strategies from literature to bring home a pedagogic message about the catastrophic direction of environmental and climatological developments. Oreskes and Conway's text stands somewhat apart from the previous examples in that it is not an appendix to a work in one volume by the same author(s), but an independent publication. But it can be seen as a local text that communicates its invented nature within the context of a global textual field to which purposes it is subordinated: *The Collapse* is arguably an appendix to the broader oeuvre of Oreskes and Conway—prominent historians of science—and to the broad field of contemporary nonfictional texts in environmental science communication. In part, its purpose is to complement or correct perceived deficiencies of environmental science communication: Naomi Oreskes grounds the idea of *The Collapse of Western Civilization* in a time when she was "pondering why scientists' attempts at communication were proving so conspicuously ineffective" (63). "Fiction," she thought, could address the shortcomings of science communication.

In the blurb and appendices of *The Collapse of Western Civilization*, as well as in reviews and academic research on the text, it is repeatedly, and often emphatically, called "a fiction," "fictional," and even "a novel" (see, e.g., Corneliussen). Naomi Oreskes states unequivocally in an interview that "this is a work of fiction" (PRI), and it is listed as one of the "10 Must Read Climate-Fiction Books" at Lund's *Climaginaries* website (Lund). Timothy Clark, in *The Value of Ecocriticism*, calls it "a dystopian novel" and an "example of literature as public witness" (78). Stef Craps

calls it a "fictional future history" (479), echoing the blurb of the book; and Pieter Vermeulen writes how the authors, in *The Collapse*, "adopt a literary device, which allows them to do what literature, and especially the form of the novel, has, in a sense, always done: narrate things that are not certain—that are not even true, but that are still credible or plausible—in ways that articulate different spheres of knowledge [...] into a coherent pattern" (875–76). But to what extent does the text, when considered more closely, conform to definitions of fictionality, or to signposts of fictionality? And if it does not, what are its features that make it different from more traditional science communication?

Jean-Marie Schaeffer argues that the fundamental characteristic of fiction is its "pragmatic frame," and more specifically, the pragmatic frame of the "ludic feint or shared feint" (122; emphasis original)—the knowledge, intentionally shared between narrator and narratee, that for the story that is told "the question itself of the truth or falsity of representations does not seem to be pertinent [...] anymore" (124; see also Skov Nielsen et al., "Ten Theses"). But in *The Collapse of Western Civilization*—as in our other examples the pragmatic frame hinges upon a shared understanding between narrator and narratee that some of the most important attributes of the imagined storyworld belong to the pathways of the readers' actual world, with important repercussions for those readers' choices in the actual world. Similar to Hansen's future vision, Oreskes and Conway emphasize the urgency of their message: as the authors argue in the interview appended to the text, the goal was "always [...] of being true to the facts: true to what science tells us could really happen if we continue with business as usual" (66; my emphasis). The pragmatic frame of *The* Collapse is, if anything, contradictory: like the earlier examples of fraught fictionality, it combines a commitment to "being true to the facts" with political urgency, but paratexts such as the subtitle and afterword simultaneously aim to suggest fictionality. A similarly contradictory image arises when examining to what extent the text features examples of signposts or indices of fiction (Cohn 109–15; Schaeffer 238–39). Again, similar to the other examples discussed so far, The End of Western Civilization scores low on depictions of privileged access to the thoughts or sentiments of third persons; the text contains no examples of verbs of interior processes. The narrator is presented as a Chinese "future historian," but, as Stef Craps notes, we as readers "learn very little about life in the fictional future he or she inhabits—in fact, the only reason we know this character lives in China is that the authors tell us as much in the introduction" (482). The text itself provides no information about the narrator beyond an impersonal first-person plural (Oreskes and Conway 52). Here, as in the examples of "fraught fictionality" analyzed above, the voice of the narrator is largely a surrogate for that of the real-life authors. The most important property of the narrators in all of these texts is that they are witnesses from the future, and they gain their authority in large part from this privileged perspective. There are no individual fictional characters; similar to "Charlottesville" and "In the Year 2525," characters are predominantly defined by their thematic, representative properties, and things are happening to them in an entirely impersonal manner, as in the following examples:

Though leaders of the scientific community protested, scientists yielded to the demands [. . .] (11)

Some scientists in the early twenty-first century [...] had recognized that hurricanes were intensifying. (16)

Physical scientists were chief among the individuals and groups who tried to warn the world of climate change, both before and as it happened. (45)

As these examples show, meaningful characters from the perspective of possible climate agency are presented as highly impersonal, but also as belonging to a narrowly defined, small professional group: scientists. There are few individual characters: again, scientists (Friedrich von Hayek and Milton Friedman are mentioned [42]), and, again a US president (Obama [8]). But there is nothing fictional about them: these are actual historical figures, who are described in what is in effect (in its account of events up to 2010) a roughly accurate historical account of some of the general facts that contextualize climate change and the direction of Western capitalism.

The text does contain a number of imaginative and rhetorical elements. The first is the rhetorical device of the "message from the future," a trope that, as seen above in connection with "In the Year 2525," has gained currency in twenty-first century future fiction. The idea of a future reader is only implicitly present in Oreskes and Conway's text itself, but it is brought home most forcefully (a) in its cover image, which shows a bottle containing a letter somewhere in a future desert; (b) in the subtitle "A View from the Future"; and (c) in Oreskes's argument, in the appended interview, that "books are like a message in a bottle. You hope someone will open it, read it, and get the message. Whatever that is" (79). While all these elements point to the rhetorical potential of the trope, it remains largely underdeveloped in the text itself, especially when compared to recent examples from actual fiction, notably Cormac McCarthy's *The Road* and Margaret Atwood's *Oryx and Crake* (see Boxall 218–19).

A second notable rhetorical position is that of the bird's-eye view perspective. Following the introduction and title page, the first element of the text that has narrativity—the "ability to evoke [. . .] stories" (Ryan et al. 139)— is a future map of the Netherlands, with the caption title "The nation formerly known as the Netherlands" (xii). The map shows sea levels around the Netherlands in the year 2300 superimposed upon an image of the country's shoreline in the year 2000, demonstrating the dramatic flooding that will take place in that area. Every chapter of the booklet is accompanied with such a future flood map. In science communication, policy, and in the media, similar flood maps have become a common staple in future visions of rising water (see Dobraszczyk), and this rhetorical focus on flood maps, in Oreskes and Conway, can be seen as one of the features of the text that is close to traditional modes of policy and science communication.

In summary, the text of *The Collapse of Western Civilization* gestures toward fictionality and elements of nonfiction simultaneously. The authors claim that it is a "fiction" and that it is recounted from the future by a fictional narrator. But apart from this authorial claim, markers of fictionality are largely missing from the text and

from the communicative situation. The authors' claim to write "fiction" appears as an attempt at fictionality that misses its mark—not dissimilar to the case of a joke that is misunderstood or an utterance said in jest but understood in earnest (see Skov Nielsen et al., "Ten Theses"). Apart from the statement that it is a fiction, virtually all other properties of the text and its communicative context invite a reading of *The Collapse* as a recognizably nonfictional text that is indistinguishable in its generic features, layout, and projected audience from other nonfictional future scenarios that appeared in the same period, such as The World Energy Council's Deciding the Future: Energy Policy Scenarios to 2050 (2007) or the UK Office of Science and Technology's Intelligent Infrastructure Futures: The Scenarios – Towards 2055 (2006). Virtually nothing in The Collapse, or in the context of its communication, conforms to the readers' genre expectations of what fictional storytelling about possible futures entails. There are no aliens or interplanetary travel (as in science fiction, or in Hansen's "In the Year 2525"), but also no representation of qualia (as in Goodell's "Atlantis"), no use of imaginative names with rhetorical resonance (as in "Charlottesville," "Atlantis," and "In the Year 2525"), no identifiable characters, no elaborate invention to speak of. Instead, the reader is confronted with a text that has all the hallmarks of recognizable nonfictional future storytelling (policy, planning, earnest future scenarios) in its textual features, its layout, and its communicative context (a booklet written by two science historians and published by Columbia Press).

That Oreskes and Conway missed their mark in trying to produce "fiction" should perhaps not be surprising: they are neither literary authors nor professionals in futures studies. The fact that so many (academic) readers were ready to read Oreskes and Conway's text as fictional is less easy to account for. One possible reason is that many of these readers—literary scholars discussing literature's role in climate change communication—were ready to be convinced by the key argument Oreskes and Conway wanted to make with their text: that nonfictional scientific communication about anthropogenic, cataclysmic climate change has not been successful in getting its message across, and that literary fiction can make an important contribution in this respect. But there is another, altogether more serious factor that could explain the confusion about the text's status; namely, the relative lack of genre literacy when it comes to future storytelling, and the protean status of contemporary texts that envision possible futures. In an era when textual projections about future risks (from epidemic curves to visions of the possible extinction of humankind) proliferate, this lack of genre literacy should not be taken lightly.

Conclusion

In our future-oriented era, policy scenarios as well as media and science reports envisioning possible futures have become increasingly important in shaping policy and public awareness. Moving from abstract to concrete, from the general to the particular, "fictional" excerpts within nonfictional texts may serve to bring the consequences of choosing a particular path home to the reader. The four texts discussed here—
"Atlantis"; "Charlottesville"; "In the Year 2525"; and *The Collapse of Western*

Civilization—combine a pragmatic framework defined by sincerity with the aim to bring across the disconcerting consequences of a possible future to the general public, by embedding local texts that contain invented stories within global texts that are emphatically nonfictional. The result is "fraught fictionality": a profoundly contradictory mode of storytelling that brings together urgent real-world referentiality with a narrative that is conceived as intentionally invented, in view of shaping policy and public awareness.

The examination of these four "fraught fictional" texts also adds new perspectives to the study of fictionality, first of all by complicating the question of signalled truth claims. In the rhetorical approach, fictionality is seen as the "intentional use of invented stories," inviting the reader to assume that the fictional text is not making referential claims (Skov Nielsen et al., "Ten Theses" 62, 68). But texts set in the future cannot, by definition, be examined in strict terms of referential truth claims vis-à-vis the real world, because they pertain to the domain of the not-yet (rather than to the domains of the actual or non-actual). In this context, the examination of fictionality and referentiality becomes one of degrees. These are, first of all, degrees of fictionality in terms of the level of elaboration of the presented storyworld (see Skov Nielsen et al., "Fictionality"). As important is the degree of real-world urgency that is communicated, for example in paratexts such as appended interviews or explanatory prefaces. Finally, what stands out in the examination of "fraught fictionality" is the insistence, shared by this article with rhetorical approaches, that fictionality is "a means for negotiating an engagement with [the] world," and that this is made possible by "a double exposure of imagined and real," which can also be a "double exposure of present and future" ("Ten Theses" 63, 68).

The four "fraught fictional" texts examined here share a number of striking features. The mode of representation is largely impersonal, with a focus on third person-plural narration. Individual characters tend to be lacking, and there is a highly limited set of stock characters with foregrounded thematic functions, which sets the stage for a conspicuously narrow frame for meaningful agency (typically confined to "scientists" and a generic American president). Little to no insight is gained as to the motives, fears, or hopes of the people inhabiting future worlds, since there are no instances of "theory of mind" or references to individual thoughts, feelings, or indeed experiences. Regardless of the aim to "provide a more concrete understanding" or to "provide detail" (OTA 9), instances of qualia are rare. Also striking is the prevalence of a panoramic and distancing viewpoint. In terms of rhetorical strategies, these texts draw on a narrow field of cultural tropes from American cultural history, often with considerable ideological baggage, such as the examples of the Mayflower in "In the Year 2525" and Jeffersonian anti-urbanism in "Charlottesville."

If the recent turn to what I here call "fraught fictionality" stems in large part from the perceived limits of storytelling tools in policy and science communication, then these conclusions, which foreground the narrow range of experiences, characters, and cultural tropes used in "fraught fictionality," must be an urgent wake-up call for policy makers and scientists who want to turn to "fiction" for rhetorical purposes, to carefully consider the aims they want to achieve with these kinds of storytelling, and the means by which these may be reached.

Endnotes

- ¹ The prologue appeared in slightly different form in the July 4th, 2013 issue of *Rolling Stone* with the headline "Goodbye, Miami" (Goodell), and has since been excerpted in various media outlets, including the December 17, 2017 issue of *The Guardian*.
- ² Interestingly, the dramatic dialogue mirrors that in the final appendix to the book, which consists of a dialogic interview between "Bill" (Bill McKibben) and "Jim" (James Hansen) (258–71). *The Collapse of Western Civilization* also features an appended interview for similar purposes.
- ³ The main difference between Oreskes and Conway's text, on the one hand, and these scenarios, on the other, is that in the case of the latter, the texts were drawn up on the basis of clearly outlined methodologies within futures studies, including carefully conducted Delphi interviews and workshops.

Works Cited

Ameel, Lieven. "Governing the Future: Perspectives from Literary Studies – Commentary to Jones." *Fennia* 197.1 (2019): 145–48.

Barnaby, Frank. "The Effects of Nuclear War: Review." New Scientist 3 (April 1980): 37-38.

Bell, Wendell. Foundations of Futures Studies. Vol. 1, History, Purposes, and Knowledge. New Brunswick: Transaction, 1997.

Boxall, Peter. Twenty-First Century Fiction: A Critical Introduction. Cambridge: Cambridge Univ. Press, 2013.

Buell, Lawrence. *The Environmental Imagination: Thoreau, Nature Writing, and the Formation of American Culture.*Cambridge, MA: Harvard Univ. Press, 1995.

Cohn, Dorrit. The Distinction of Fiction. Baltimore: Johns Hopkins Univ. Press, 1999.

Clark, Timothy. The Value of Ecocriticism. Cambridge: Cambridge Univ. Press, 2019.

Clark, Matthew, and James Phelan. *Debating Rhetorical Narratology: On the Synthetic, Mimetic, and Thematic Aspects of Narrative*. Columbus: The Ohio State Univ. Press, 2020.

Craps, Stef. "Climate Change and the Art of Anticipatory Memory." Parallax 23.4 (2017): 479–92.

Curry, Andrew, Tony Hodgson, Rachel Kelnar, and Alister Wilson. *Intelligent Infrastructure Futures: The Scenarios – Towards 2055*. London: Foresight Directorate, 2006.

Dobraszczyk, Paul. "Sunken Cities: Climate Change, Urban Futures and the Imagination of Submergence." International Journal of Urban and Regional Research 41.6 (2017): 868–87.

Goodell, Jeff. *The Water Will Come: Rising Seas, Sinking Cities, and the Remaking of the Civilized World.* New York: Little, Brown, and Company, 2017.

de Jouvenel, Bertrand. L'Art de la Conjecture. Monaco: Éditions du Rocher, 1964.

Hansen, James. Storms of My Grandchildren: The Truth About the Coming Climate Catastrophe and Our Last Chance to Save Humanity. London: Bloomsbury Press, 2009.

Herman, David. Basic Elements of Narrative. Oxford: Wiley-Blackwell, 2009.

Lund University. "10 Must-Read Climate Fiction Books." Hallbarhet.lu.se.

- Mäntysalo, Raine, and Kristi Grisakov. 2016. "Framing 'Evidence' and Scenario Stories in Strategic Spatial Planning." In *Situated Practices of Strategic Planning*, edited by Louis Albrechts, Alessandro Balducci, and Jean Hillier, 348–361. London: Routledge, 2016.
- Meyer, Zlati. "Get Ready, World: 'The Water Will Come,' A New Book Warns." *USA TODAY*, 31 October 2017. https://eu.usatoday.com/story/life/books/2017/10/31/book-review-the-water-will-come-jeff-goodell-climate-change/804573001/ (accessed 11 May 2021).
- OED. "Fraught." The Oxford English Dictionary. 2nd ed. Oxford: Oxford Univ. Press, 1989.
- Oreskes, Naomi, and Erik M. Conway. *The Collapse of Western Civilization: A View from the Future*. New York: Columbia Univ. Press, 2014.
- Ostrander, Madeline. "In 'The Water Will Come,' Jeff Goodell Warns That Rising Seas Won't Wait." *Undark*, 24 November 2017. https://undark.org/article/book-review-goodell-water-will-come/ (accessed 11 May 2021).
- OTA (Office of Technological Assessment). "The Effects of Nuclear War." US Government Printing Office, 1979. https://ota.fas.org/reports/7906.pdf (accessed 11 May 2021).
- Patton, Michael Quinn. Blue Marble Evaluation: Premises and Principles. New York: Guilford Press, 2020.
- Phelan, James. Reading People, Reading Plots: Character, Progression, and the Interpretation of Narrative. Chicago: Chicago Univ. Press, 1989.
- PRI. "The Collapse of Western Civilization." *Public Radio International*, 25 July 25 2014. https://www.pri.org/stories/2014-07-25/collapse-western-civilization (accessed 11 May 2021).
- Rhisiart, Martin. "Exploring the Future for Arts and Culture Organisations through Scenarios and Vignettes." *Futures* 50 (2013): 15–24.
- Ross, Andrew. Strange Weather: Culture, Science, and Technology in the Age of Limits. London: Verso, 1991.
- Ryan, Marie-Laure, Kenneth Foote, and Maoz Azaryahu. *Narrating Space, Spatializing Narrative: Where Narrative Theory and Geography Meet.* Columbus: The Ohio State Univ. Press, 2017.
- Schaeffer, Jean-Marie. Why Fiction? Translated by Dorrit Cohn. Lincoln: Univ. of Nebraska Press, 2010.
- Senior, Jennifer. "Not If the Seas Rise, But When and How High." *New York Times*, 22 November 2017. https://www.nytimes.com/2017/11/22/books/review-water-will-come-jeff-goodell.html (accessed 11 May 2021).
- Skov Nielsen, Henrik, James Phelan, and Richard Walsh. "Ten Theses about Fictionality." *Narrative* 23.1 (2015): 61–73.
- -----. "Fictionality As Rhetoric: A Response to Paul Dawson." *Narrative* 23.1 (2015): 101–11.
- Vermeulen, Pieter. "Future Readers: Narrating the Human in the Anthropocene." Textual Practice 31.5 (2017): 867–85.
- Walsh, Richard. The Rhetoric of Fictionality. Columbus: The Ohio State Univ. Press, 2007.
- Weik von Mossner, Alexa. "Imagining Geological Agency: Storytelling in the Anthropocene." *RCC Perspectives:*Transformations in Environment and Society 2016.2 (2016): 83–88.
- Wong, Richmond Y., and Vera Khovanskaya. "Speculative Design in HCI: From Corporate Imaginations to Critical Orientations." In *New Directions in Third Wave Human-Computer Interaction: Volume 2*, edited by Michael Filimowicz and Veronika Tzankova, 175–202. Berlin: Springer, 2018.

- World Energy Council. *Deciding the Future: Energy Policy Scenarios to 2050*. London: World Energy Council, 2007. http://81.47.175.201/flagship/attachments/WE_scenarios_study_online.pdf (accessed 11 May 2021).
- Zetterberg Gjerlevsen, Simona. "Fictionality." *The Living Handbook of Narratology*, 3 April 2016. http://www.lhn.uni-hamburg.de/article/fictionality (accessed 15 November 2017).
- Zetterberg Gjerlevsen, Simona, and Skov Nielsen, Henrik. "Distinguishing Fictionality." In *Exploring Fictionality:*Conceptions, Test Cases, Discussions, edited by Cindie Aaen Maagaard, Daniel Schäbler, and Marianne Wolff
 Lundholt, 19–40. Odense: University Press of Southern Denmark, 2020.
- Zunshine, Lisa. Why We Read Fiction: Theory of Mind and the Novel. Columbus: The Ohio State Univ. Press, 2006.