

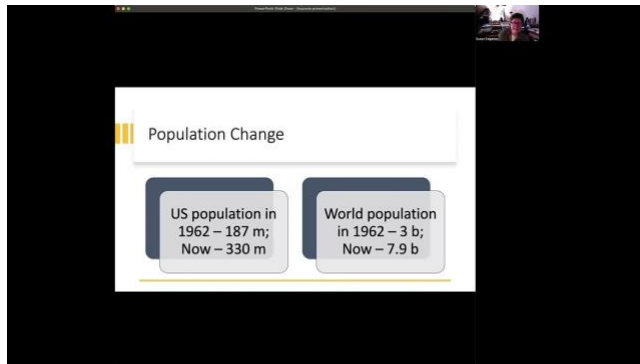
## IT'S ABOUT TIME: STORIES FOR CURRICULUM STUDIES IN THE BEFOREMATH

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[It's about time: stories for curriculum studies in the Anthropocene](#)

AAACS 2022

Conference Keynote Address

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*Dedicated to Florence Rose Krall Shepard, 1926-2022*

*Note: The Anthropocene refers to a panoply of interconnected and deeply challenging problems. In this presentation, I refer to that bundle of issues as The Problem. I draw on autobiography, history, and science fiction to do a bit of imaginative time traveling.*

It's about time we—all of us—talk about this seriously. And it's about time—this presentation, that is. We gather from different time zones today, but we are also inhabiting three time zones in common. Not Eastern, Central, Mountain, or Pacific, but past, present, and future.

The pandemic, my retirement, and the daily dire news have altered my sense of time. I have felt that I have all the time in the world AND that time is running out. It feels a bit like the fade out at the end of a song suggesting that the music isn't really ending but is going somewhere else. The song could be about my life; it could be about all the beleaguered life on this planet. I'm not ready to let the song go just yet, so I will follow

and study it. Where did it come from? What is it saying? Where is it going? What does it teach?

It is 1962, and I am not in school because school has ended for the day, or it is summer. I am seven years old, exploring the woods near the ponds and creeks in my neighborhood in north Louisiana. I crouch to study lines of ants. Frogs and turtles are temporarily taken prisoner if they are too slow. I watch as some creatures eat others. The ants gather on the body of a dead lizard. I endure multiple stings and bites in the woods, but no one worries about tick-borne diseases. Mosquitos might carry malaria, but I never got it and did not know anyone who did. That threat was mitigated by trucks that drove through the neighborhoods spraying DDT where children played, indeed, while we played. (Everyone thought DDT was harmless until Rachel Carson wrote *Silent Spring* that year, 1962.) In those north Louisiana woods, I could hear songs of two dozen or more different bird species at once, replaced at dusk by plangent notes and chords of insects and the repetitive calls of whip-poor-wills. Insect song at night was loud enough to interfere with conversation. Despite our profligate insecticide use, insects were plentiful in 1962. An evening drive always meant frequent stops to clean the splattered carcasses from the windshield.

In 1962, the U.S. population was 182.5 million. Today it is 333 million. In 1962, the world population was around 3 billion. Today, it is almost 8 billion (US Census Bureau, current website). In 1962, there were shocking kinds and amounts of pollution in the U.S.—e.g., smog in the cities, Cuyahoga River in Ohio caught fire in 1969, DDT sprayed with abandon, leaded gasoline emissions, radiation from nuclear testing, and more. The Clean Air Act of 1963 reduced smog and the Partial Nuclear Test Ban Treaty of 1963 ended above ground nuclear testing in the US, UK, and Soviet Union. Rivers and lakes improved a decade later, after passage of the Clean Water Act in 1972.

I hope you can imagine from my description the different structure of feeling in 1962 when there were far fewer humans and far more other living species. Atmospheric carbon was around 320 ppm. Today, it is 420 ppm (CO<sub>2</sub>.earth). There were climate induced disasters—storms, floods, droughts, fires—but they were not top of mind as they were so much less frequent than now. There has been an average decline worldwide of 68% in species population sizes from 1970 to 2016 (Hancock & Hersheimer, 2020, para. 1). Since 1970, nearly 3 billion birds are gone from the U.S. and Canada, largely due to habitat loss (Pennisi, 2019, para. 1). Worldwide, we're seeing decimation of insect populations, essential for pollinating our food and all plants and as sources of food for birds and other animals. We do not have to clean our windshields from insect collisions so often anymore. Human-made materials now outweigh the entire biomass of earth. In 1960, human-made materials weighed about 17% of the earth's biomass (Elhacham, Ben-Uri, Grozovski, *et al.*, 2020, *passim*).

The 1950s and 1960s was a time of prosperity for white middle class Americans. Income taxes were much higher; tax rates for the richest 1% were as high as 91% (Tax

Foundation, 2022). Income inequality—for white people—was much less than it is now, and white people enjoyed many benefits from government funding of the commons as well as social safety nets. In 1968, the minimum wage was \$1.60/hour, a livable, or almost livable, wage that would be \$13.04/hour in today's dollars (Kiger, 2019). The Federal minimum wage today is \$7.25. However, people of color in this country were denied most of these benefits (Blakemore, 2019). The Civil Rights Act of 1964, signed into law by President Lyndon Johnson, promised to ameliorate several existing racist practices, but, as you know, the promise of that act has never been fulfilled.

This generation has altered the composition of the atmosphere on a global scale through radioactive materials and a steady increase in carbon dioxide from the burning of fossil fuels...Pollution destroys beauty and menaces health. It cuts down on efficiency, reduces property values and raises taxes. The longer we wait to act, the greater the dangers and the larger the problem. (Johnson, 1965, para. 69)

How does it feel to know that our President was aware of The Problem in 1965, almost 60 years ago?

I am 66 years old; older than many in attendance at this curriculum conference. If you are under 40, it is unlikely that you remember seeing a nation or a world that remotely resembled the one of my seventh year. If you are under 40, there have always been significantly more people and fewer plants and animals in your life than existed in my seventh year. It might be difficult to imagine what Raymond Williams (1977) called the “structures of feeling” (pp. 128-135) generated by the physical and cultural environments of that time, 1962. I'm trying to paint a picture of that difference through my own story because I imagine that it is hard to imagine a world never experienced—except through stories.

Flash forward to the very recent past: Summer of 2021, I stepped out of my remote southern Vermont house into a slightly brown haze that smelled bad and burned my eyes. I thought there might be a house fire nearby. It was, however, smoke that had traveled all the way to the east coast from the wildfires in the west (Nesbitt and Fanto, 2021, *passim*). “Four of California's 20 largest fires on record have occurred during the 2021 season” (Climatesignals.org, 2022). In Montana, “2017 was state's worst fire season since 1910.” (July 2021 headline from KTVQ): “2020 was the worst fire season in 2000 years.”

For the past two years, people have been buying all available houses in Vermont, often sight unseen and with cash. Prior to this, houses in my part of the state sat on the market for years. People are moving here from Boston, New York City, and from the western states. City folk seemed to be thinking ahead to the next pandemic and now also realize they can work remotely. Folks from the western states were terrified of the new fire seasons. These are domestic climate refugees. The front edge of this

movement consists of those who have money. As conditions deteriorate, as usual, those without deep pockets will be the last to find safety. As conditions deteriorate further, there will be no safety for anyone anywhere unless fast and dramatic action is taken.

April 2022. Perhaps, like me, you are battered and bewildered by the last five years – four years of a malignant narcissist white nationalist US president, two years of a global pandemic, and the threat of WWII and nuclear annihilation. And always a foreboding hum, the crawler playing beneath the headlines, is the increasingly strident news about climate change and mass extinction punctuated in real time by wildfires, droughts, heat waves, floods, storms, grid failure, mudslides. The latest Intergovernmental Panel on Climate Change (IPCC, 2022) report expresses unprecedented alarm: Climate change is accelerating, and we have very little time remaining to reverse course on this giant barge we inhabit. The report calls on us to reduce our carbon emissions worldwide by almost half in just eight years, by 2030, or face much worse consequences than we are already on schedule to experience.

There are several simultaneous challenges. The first I list here is foundational, so I will spend a little time describing it.

Scientists have calculated that we may only burn 500 more gigatons of fossil carbon if we hope to keep the average global temperature under 1.5°C higher than it was at the beginning of the industrial revolution. The fossil fuel industry, however, has located 3000 gigatons of fossil carbon in the ground, about 25% of which is owned by private companies and the rest by various nation-states. How do we convince owners of this underground fossil carbon to keep it in the ground when, based on the current price of oil, 2500 gigatons is worth about 1,500 trillion US dollars? How do we convince when our current structure of feeling, neoliberal capitalism, elevates profit above all else, and when petrostate economies depend on it?<sup>1</sup> (Robinson as cited in Gelinas, 2022, para. 6-7)

Each of the following challenges is breathtaking and worthy of our sustained attention, but for the sake of time I will only briefly mention them here.

1. Climate sensitivity, which is the term for the fact that regardless of what else we might do, the carbon we've already put in the atmosphere will continue to heat up over time.

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<sup>1</sup> This calculation of monetary value comes from Kim Stanley Robinson. I could not find his method for arriving at that figure. My own efforts to calculate based on information available from various sites came to a figure of around 700 trillion dollars. Either way, it is more money than exists on the planet now.

2. Melting of polar ice caps and other major glaciers causing sea level rise, loss of albedo (reflectiveness of the sun that keeps our global temperature lower), loss of water sources for places that depend on seasonal melts of glaciers.
3. Animal agriculture as a source of emissions, which has been underestimated by most reported stats. The global population is eating more meat than ever before, and more people want to eat more meat. In wealthy nations, a larger percentage of our diet is meat than it was in pre-industrial times.
4. Industrial agriculture – killing the soil (antidotes: small farms, permaculture, agro forestry, specialized greenhouses).
5. Ocean acidification – killing shellfish first, bleaching coral reefs on which a large percentage of ocean biodiversity depends.
6. Mass extinction – lack of biodiversity imperils us all; habitat destruction (antidote: HalfEarth project – E. O. Wilson).
7. Drought and water loss for drinking and growing food. Pollution and excessive use of water by extractive industries. More violent and frequent storms. Wildfires.
8. Pandemics – lack of habitat and human-animal relations cause zoonotic leaps of diseases to which we have no immunity.
9. Mass migration.
10. Geopolitical conflict.

How is it possible that we can make the necessary changes in the necessary timeframe, which might be less than ten years? We will need to use every tool at our disposal—policy, legislation, innovation, education. Broad acceptance of this work and these changes requires collective imagination for a future that challenges our settled structures of feeling. To do that we also need the ability to imaginatively enter the past, and to imagine the lives of others.

Crisis sometimes sparks the imagination required for rapid cultural change. Recall the beginnings of pandemic lockdown, walking around the city where all the closed businesses and offices looked like a kind of war zone. It was quiet. Animals began to retake the streets and parks. In Brazil, endangered baby sea turtles made their way to the ocean unimpeded by artificial light and other human activities for the first time in more than a decade. Wild boar entered the streets of Barcelona. Mountain goats wandered through a town in Wales. Illegal wildlife trade was curtailed. A mountain lion was spotted lounging in a tree in downtown Boulder, Colorado (McCoy, 2020). The air began to clear. In April 2020, there was a 17 percent reduction in global emissions (Mooney, 2020). City skylines in places like Los Angeles, industrial cities in China and India were seen clearly for the first time in years. Punjab and Nairobi had views of mountains that had been obscured by haze for years. Satellites revealed cleaner air across large areas in Asia, Europe, and North America (Cohan, 2020). Waterways in Venice cleared (Condie, 2020). Most of these changes were attributed to the huge reduction in ground travel. Gasoline prices plummeted for lack of demand.

A significant percentage of the reduction was also due to reduced air travel (Mooney, 2020). People discovered that business travel is often not necessary, nor is travel to and from work for many, thanks to the internet.

Chet Bowers (2016) wrote of “[t]he power of mythical thinking to distort awareness of what should be obvious to everyone . . . [including] how the exploitation of the natural environment is not leading to progress, but to greater scarcity and impoverishment” (p. 43). The pandemic offered a unique opportunity to unveil this deeply embedded mythical thinking for what it is. It has given us a glimpse in real time of a revitalized environmental commons. Maybe it even allowed us to imagine, for just a moment, the end of capitalism as we know it.

Of course, all has returned to the pre-pandemic scene now. But we cannot un-see what we saw. It is a part of us now. We also learned something about the sacrifice required to make these changes—changes that are still not sufficient for the goal to keep warming below 1.5° C. Perhaps it enabled us to begin inhabiting a new structure of feeling.

Imagine another past—not 1962, not 2020, but 1492-1600 in the Americas. In a series of pandemics brought about by European invasion, indigenous populations were reduced by ninety percent. Based on an estimated indigenous population of 60 million, that constituted a ten percent reduction of the global population, the equivalent of 790 million people in today’s terms. That loss contributed, scientists now believe, to a human induced global climate change. “The drop in temperature during this period is known as the ‘Little Ice Age’, a time when the river Thames in London would regularly freeze over, snowstorms were common in Portugal and disrupted agriculture caused famines in several European countries” (Milman, 2019, para. 6). That loss of indigenous people also forever changed life in the Americas (Koch, Brierley, Maslin, & Lewis, 2019, *passim*). Small ill-prepared bands of Europeans would never have overwhelmed some 60 million indigenous peoples on this continent without the help of—mostly unintentional—biological warfare. We will never know precisely how the course of the world was changed but can speculate that the ancient knowledge of the environment that died with those indigenous peoples might have been incredibly useful to us now.

Bowers (2018) suggested that the erosion of the quest for wisdom—a quest that was central to indigenous cultures of the world—has been colonized by “followers of the scientific method” (p. 200). He argued that the astonishing scientific and technological achievements of recent centuries have come to mean that “we do not need to understand wisdom” (p. 200), including ecological wisdom that came from thousands of years of observation and survival in particular ecosystems.

The past, however, does not hold the only key for mitigating further damage and adapting to the damage that humans have done. The existential threats we face today

are so vast and complex that we can barely imagine the future. We need near-future stories that light up the imagination, provoke courageous action, and cultivate wisdom. Such stories can neither strain credulity with unwarranted optimism, nor simply pretend not to see at all. Imagine a workable society that is a utopia for our time—not the ideal or the perfect, no paradise. The new utopia is the best possible life we can create given our situation and limitations. Speculative fiction, science fiction, climate fiction is, as Kim Stanley Robinson (2020, May 1, para. 12) writes, “the realism of our time.” It can introduce us to a previously unimaginable livable future, or to a future that we want to avoid. When we are able to picture realistic possibilities for a decent future life, willingness to change and to pressure politicians makes more sense to more people—there is a learned sense of what can be. At the same time, stories that credibly walk us through the dire consequences of failure to act can also motivate change.

### Parable of the Talents

Discussing her novel, *Parable of the Talents*, Octavia Butler (as cited in Canavan, 2014, para. 3) told an audience, “Sometime ago I read some place that Robert A. Heinlein had these three categories of science-fiction stories: the what-if category; the if-only category; and the if-this-goes-on category. And I liked the idea. So this is definitely an if-this-goes-on story. And if it’s true, if it’s anywhere near true, we’re all in trouble.” First of the duology, *Parable of the Sower*, begins in 2024; *Parable of the Talents* in 2032—both close enough in time to where we are now that we can easily imagine ourselves living then. Both paint a dystopian picture that is uncomfortable because, though much uglier than where we are now, it is uncannily close and easily imaginable. Extreme and expanding inequality, the near loss of US democracy to autocracy, and the worldwide movements toward autocracy can easily lead to such a dystopia.

*Parable of the Talents*, published in 1998, is particularly shocking in its familiarity. After recovering somewhat from the chaos in *Parable of the Sower* that resulted from climactic, economic, and sociological crises, atrocities from extreme inequalities continued. There were various forms of indentured servitude and slavery enforced by high-tech slave collars. Women who were opinionated might have their tongues cut out. People were addicted to designer drugs and a technology called “dream masks,” which provided virtual fantasy escape. News was reduced to “news bullets” — twenty-five or thirty words that were meant to explain the most complex and serious or the most mundane and trivial in the same truncated way. A violent movement was afoot, instigated by a new Presidential candidate, a Texas senator and religious zealot running on a platform to “make America great again” (Aguirre, 2017). What followed his election mirrored my worst nightmares during the Trump administration—and, well, that nightmare continues.

The conditions that precipitated this dystopian horror included climate change, but also growing inequality that has been expanding in this neoliberal capitalist and racist

society. We see in Butler's story the ways these conditions are inextricably intertwined, a valuable and critical recognition.

### **Bewilderment**

In his novel *Bewilderment*, Richard Powers also creates a story that is set near our current time but is neither dystopian nor utopian. When asked by an interviewer if it was his intention to force readers to consider the real-world moment, he responded:

I was thinking a little bit along the lines of the form that science fiction writers like to call the “near-term future,” where the story treats a world that’s a lot like ours, but set in some undesignated time in the future, in a way that allows the writer to speculate about the potential of the present to unfold in different ways. . . . And by putting the Earth on a slightly different trajectory, I was hoping to intensify and to make real again a lot of the things that we readers would probably simply gloss over because we’ve already discounted them as familiar. (Powers as cited in Wolfson, 2021, para. 5)

In *Bewilderment*, we meet Theo, an astrobiologist who is the single parent of a “neurodivergent” nine-year-old child, Robin. Robin is a bright and extremely sensitive boy who is attuned to nature, aware of climate change, mass extinction, and other environmental problems. Robin is something of a Greta Thunberg character. As a parent, as a teacher, how does one talk to this child about what he sees happening to life on the planet? Theo is left alone to raise this child because his wife, the child’s mother, has been killed in a car crash.

Time and place expands when at night father and son explore known planets with speculative software. The software builds upon known factors such as atmospheric composition, temperature, location relative to a star and other planets to consider what types of life might be able to survive there, and how these life forms might evolve over time. These virtual adventures calm Robin somewhat, but his anxiety over the loss of his mother, his lack of connection with other kids due to his neurodivergence, and his despair over mass extinction is wreaking havoc in his and his father’s lives.

Out of desperation, Theo visits an acquaintance who is a well-known neurobiology researcher and is invited to bring Robin in for treatment with an experimental technique called decoded neurofeedback. In the aforementioned interview, Powers (as cited in Wolfson, 2021, para. 24) explains:

Everything elicits the terror of isolation, and it’s only this empathy machine, this learning to link himself into somebody else’s state of mind, strangers at first and then his mother, that starts to bring about in him this idea that there’s nothing to be afraid of—that life is everywhere, and it’s an experiment that includes you. He’s transformed from an outsider to an insider—he’s suddenly connected through kinship to all other



living things. In a strange way, what happens to Robin is simply the discovery of the fact that his fate is part of this much larger thing. And that greatly lowers all the anxiety about loss and disconnection and mortality that was driving him up to that point in the story.

“It’s not going to be cognitive intelligence that gets us into the next viable culture here on earth,” Powers says, “it’s going to be emotional intelligence. . . . We have to get wiser, not necessarily smarter” (Wolfson, 2021, para. 26). How do we do that? Powers (as cited in Wolfson, 2021, para. 27) suggests:

Stories are the great empathy machine. Decoded neurofeedback in this novel is really a kind of figuration, a metaphor for storytelling. It’s stories that allow us to occupy some other position to see what the world feels like if we weren’t us. And that is the only thing that has the power to change our consciousness. We have to be taken to another place and be another person for a while before we can see the validity of that difference and not be afraid of that difference anymore. . . . *it will require stories that show that the change from how we lived to how we need to live isn’t a terrifying thing.* (emphasis added)

The empathy machine, as Powers refers to the decoded neurofeedback apparatus, might be more than a metaphor for storytelling. It offered the stories of others through something more experiential than reading. But ultimately, they were stories. With Powers, I am suggesting that good enough stories—emotionally engaging, with vivid imagery, good appeal to reason, and multisensory language (or even with images and sounds)—can show us how to survive. Powers’ *Bewilderment* is one such story as it teaches us new ways to feel and think about our situation. Another “good enough story” that extends the reader’s sense of future possibility is found in the novel that I discuss next.

### **Ministry for the Future**

*If I could get policymakers, and citizens, everywhere to read just one book this year, it would be Kim Stanley Robinson’s The Ministry for the Future.*

*Klein, 2020, para. 1*

Kim Stanley Robinson dedicates this incredibly ambitious novel about The Problem to Frederic Jameson, his doctoral mentor. By page 25 we read, “it is easier to imagine the end of the world than the end of capitalism,” and the stage is set for a massive demonstration about how that truism might be defeated.

In an interview with Robinson, Derrick O’Keefe (2022) characterizes the novel as:

A speculative history of the next few decades, the novel revolves around an international ministry assembled to help implement the Paris climate agreement. The novel's action spans the globe, featuring popular uprisings, ecoterrorism, asymmetrical warfare, student debt strikes, and geoengineering. Green New Deal-style programs in a number of the world's biggest economies feature prominently—with a post-BJP India leading the way—and the commandeering of many of the world's key central banks to finance the work toward a just transition off fossil fuels is explored. (para. 2)

India leads the way because of a catastrophic heat wave in the opening chapter that lasted more than two weeks, crashed the grid, and killed twenty million people, an entirely possible scenario for any number of places around the world. It is horrific, and there is no way for Indian politicians and people to forget or ignore the event.

Robinson (2020) details plans for a new economic structure starting with the central banks that is “neither capitalism nor communism” (p. 171). Not much is or should be off the table that might rapidly decarbonize the atmosphere, even if fossil fuel industries and nation-states must be bribed, for example. (Recall the 1,500 trillion-dollar value for the carbon left in the ground after we've burned all we can.) Economic change is perhaps the most fundamental solution to avoiding the worst outcomes. Robinson calls the new system “post-capitalism.” He explains:

I . . . want to make a distinction between economics and political economy, because by and large, economics as it's practiced now is the study of capitalism. It takes the axioms of capitalism as givens and then tries to work from those to various ameliorations and tweaks to the system that would make for a better capitalism, but they don't question the fundamental axioms (Robinson as cited in O'Keefe, 2022, para. 24).

Capitalist economics misunderstands and misjudges the world badly, and that's why we're in the mess we're in—caught between biosphere degradation and radical social inequality. These are both natural results of capitalism as such, a result of the economic calculations we make under capitalist axioms (Robinson as cited in O'Keefe, 2022, para. 28).

In the novel's proposed system, leaders of the central banks are convinced—perhaps even strong-armed—to move the primary currency to a fiat currency called ‘carbon coin.’ It is forever traceable via blockchain so that it will not be possible to hide or launder money. Assets of the uber rich become stranded. A company, a country, an individual earns carbon coin by doing things to sequester carbon. Fossil fuel industries or petrostates, for example, will be paid to leave the carbon in the ground. Petrostates will also be paid to build clean energy infrastructure. An individual farmer will be paid carbon coin to use sustainable agricultural practices that sequester carbon. That is the carrot. The stick is carbon taxing where those who emit the most get taxed at the

highest rate—a progressive tax. Money collected from these taxes will be returned to those most in need of it (Robinson, 2020, pp. 171-176, 342-349).

Five or so years after the switch, carbon emissions drop precipitously (p. 478). Other changes include greater use of electricity in transportation, switching air travel to hydrogen fueled “air ships” —slower but much cleaner. Cargo ships use new technologies that combine solar electricity generation with wind power. Appropriate to region, sustainable agricultural practices replace industrial agriculture. E. O. Wilson’s ‘half-earth’ project is enacted whereby half the earth’s land mass is set aside to preserve the diversity of life, including corridors for animal migration. There are humane options for refugees. Wealthier nations fulfill their promise to help less wealthy nations, as proposed in the Paris Agreement, to create sustainable infrastructure that still allows for economic growth in places that did not have the benefit of years of fossil fuel growth.

The novel seems so clearly correct both in its logic regarding The Problem and what needs to be done about it, and its painstakingly accurate descriptions of technologies to come for which study and experiment has already proven promising, that the addition of eco-terrorism to the mix of proposed solutions comes as a shock. The prospects of transforming the central banks and how we ‘do’ money to a decarbonizing economy, transforming agriculture into a regionally appropriate mix of sustainable techniques such as permaculture and agroforestry, transforming the energy sector to 100% carbon free and the transportation sector to the same are so hopeful, so encouraging, until one realizes that there will be those who stand in the way for profit—those who would sooner kill life on the planet than give up personal wealth and power. That is when the possibility, and even the need, for “black wing” methods seems likely. Robinson repeats in several talks that he included these events—targeted assassinations, drones that take down commercial jets, and bioterrorism against industrial slaughterhouses—because they are plausible and may be inevitable, not because he advocates extralegal activities that physically harm others. This aspect of the novel is provocative and worthy of a complicated conversation. Challenges to the rule of law at that level might give rise to a world in which we do not wish to live.

The story is neither utopian nor dystopian. It is, Bill McKibben (2020, para. 25) says, anti-dystopian (or, a new term to me, optopian, the best we can hope for). In this novel, “climate change is the crisis that finally forces [hu]mankind to deal with global inequality.” *The Ministry for the Future* offers an extraordinarily well-researched road map to salvaging life on the planet. Whether or not we develop the will to do what is necessary, this novel enables readers to envision the possibility. It was exactly what I needed to read at this time. In the last pages, I float with others in an updated dirigible, not far above land set aside for wildlife. Our vessel is quiet, clean, unobtrusive. We

gaze upon the revitalized wilderness below and peer through spotting scopes at creatures brought back from the brink of extinction, thriving now.

### Conclusion

A justifiable curriculum is one that can help students make connections from histories of racism, inequality, colonialism, imperialism, environmental injustice—honest histories—to the conflicts, crises, and suffering of the day. Imagining a future, such as in *Parable of the Talents*, where these historical trends continue in logical progression to possibilities that we do NOT want can create a crisis that opens the student to new structures of feeling. But stopping there can lead to despair. We must be able to envision possibilities for a future that is more livable and equitable. Near term speculative fiction that is credible is one way to do that.

These stories explicitly and implicitly critique the concept of human exceptionalism—the idea that humans are exceptionally deserving of rights and considerations and are independent enough from other life forms to warrant ignoring or abusing them. However, these stories also point to the ways humans ARE exceptional. For one, we are an exceptionally destructive species. Other species are dependent upon us to do the right thing at this point, so we are exceptionally responsible for what we have wrought. We have biological qualities that have allowed us to be more clever inventors, in some senses, than other animals and plants, though our cleverness often outpaces our wisdom. Richard Powers (Wyatt, 2020, *passim*) reports that after experiencing an epiphany while walking through a redwood forest, he knew that he could never write from a standpoint of human exceptionalism again.

Given the existential threat posed by The Problem, I suggest that consciousness of The Problem needs to permeate everything we teach, become part of the air we breathe, the ground on which we walk. “What’s good is what’s good for the biosphere” (Robinson, 2020). That is not to say that one need constantly talk about or refer directly to The Problem. But it might mean that whether we are discussing literature, philosophy, math, science, sociology, history, art or education, we are thinking about the problem of human exceptionalism until we no longer need to think about it—that is, until it becomes second nature. I compare it to what Toni Morrison (1992, *passim*) revealed in *Playing in the Dark* where she shone a light on whiteness and the unconscious proliferation of American Africanisms in the literary canon. Blackness is an absent presence whose denial and negation distorts and damages the culture. When writers recognize this attempt at omission and distortion, when they can no longer write without this recognition, the perspectival shift can become a part of the culture. Perhaps in similar fashion, when we recognize the mistake of human exceptionalism, when we can no longer write or teach from that perspective, we change irreversibly the culture to become artists of survival.

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