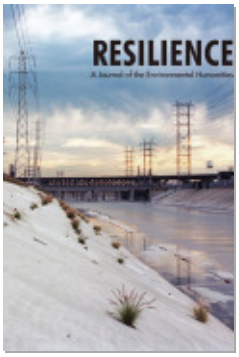
Learning to Imagine the Future: The Value of Affirmative Speculation in Climate Change Education



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Transition Discourses for Climate in Transition

What should the goal of educators be in a warming world? There can be no simple answer to such a question, but I take as a point of departure that educators engaged in any form of environmental education must confront anthropogenic climate change as a central concern of the various disciplines contributing to environmental studies education. Defining what the goals of climate change education at the college level should be across various disciplines is an essential problem that environmental educators must urgently work to articulate. This essay describes a creative-writing and critical-reading assignment that asks students to imagine a future utopia that has adapted to or ameliorated global environmental crisis before leading students through a critical investigation into the historical processes (or lack thereof) within these representations of the best of all possible futures. I introduce this assignment, which I have developed and implemented in a course called Imagining Environmental Futures, as a small intervention into the collective failure of imagination, which precludes widespread political response to climate change, and as a modest intervention into climate change pedagogy in the humanities.

The underlying issue that spurs the urgency of this pedagogical problem is that the global political response to climate change has not been commensurate to the tremendous challenges and threats climate change poses. For anyone who is committed to mitigating the amount of change or to humanely adapting to the effects of already inevitable climate change, the question of how to mobilize a sufficient political response must remain a central object of study and action. Yet equally important and vexing to conceptualizing and realizing the means by which humans may mitigate the effects of climate change is the question of why, with as many as 97 percent of climate scientists agreeing to the fundamental facts about climate change and its potentially terrible consequences, policy makers and the public have not placed climate change at the heart of public discourse.[1]

What is increasingly clear from a bevy of polls, research, and criticism is that it is a mistake to think that giving students and the public more information about climate change will lead to meaningful education and political action. Kari Norgaard, a sociologist who studies the kind of "climate denial" that keeps well-educated, ostensibly progressive people from becoming more politically active about climate change, describes the central myth of the "information deficit models" diagnosing climate inaction:

> There is a sense that 'if people only knew,' they would act differently: that is, drive less, 'rise up,' and put pressure on the government. . . . The information deficit approach cannot explain a paradoxical phenomenon: as evidence for climate change pours in, and as predictions become more and more alarming and scientific consensus increases, interest in the issue . . . is declining.[2]

Norgaard's study of the Norwegian citizens and American environmental studies undergraduate students argues that the disturbing emotions associated with climate change initiate and construct a kind of socially pervasive denial that discourages people from thinking or talking about climate change in ways that allow them to imagine the reality of the problems or engage in the kind of actions that could realistically mitigate climate change. Her work builds on Stanley Cohen's groundbreaking *States of Denial: Knowing about Atrocities and Suffering*, in which Cohen theorizes that denial is socially constructed. Norgaard and Cohen find that awareness-building educational ventures have limited ef-

fect at overcoming socially constructed denial. As Cohen baldly puts it, "the bad news is in; more information doesn't help."[3] George Lakoff refers to this as the defining progressive Enlightenment myth: the truth will set us free, and "facts" will be acknowledged and rationally acted on by individuals with the common good in mind.[4] Norgaard's extensive study shows that more information not only may be ineffective but may actively work to further paralyze citizen organization and activism. Confronted with the inadequacy of information-driven education to engender lasting political response to issues such as climate change or genocide, Cohen argues that "the political problem is to figure out how to create these conditions" to break individuals from denial, by showing citizens "cultural channels" that clearly inform and enable them to act.[5]

For students and citizens to perceive such cultural channels requires educators to do more than teach students the physical science or societal implications of climate change now and in the future. It is necessary that students of climate change understand the *reasons and processes* by which climate change continues to confound anything remotely close to adequate policy response. The struggle for individuals to "imagine the reality of our current situation" is, according to Norgaard, a central orchestrator of the uncomfortable emotions that facilitate climate denial and obstruct meaningful climate action.[6] While climate science continues to yield more accurate information about climate change, our collective imaginaries continue to founder in articulating viable, humane futures. As Bill McKibben bluntly put the issue in a 2005 op-ed in *Grist*, "oddly, though we know about [climate change], we don't *know* about it. It hasn't registered in our gut; it isn't part of our culture."[7] McKibben articulates a crisis of knowledge, not in terms of the physical science or the technical prowess necessary to address climate change, but rather a crisis of cultural knowledge—a crisis of imaginative capacity. For McKibben and critics such as Daniel Kramb, this collective imaginative failure is either indexed by or caused by the dearth of art representing climate change. Although McKibben challenges writers and artists to better engage with climate change, it is my contention that his challenge should additionally be posed to climate change educators. How can educators foster a deep, cultural understanding of climate change?

Creatively imagining the future in a world with a changed climate is one way of fostering and testing a student's depth of understanding climate change. The summary for policy makers of the Intergovernmental

Panel on Climate Change periodic assessment reports lists projections of the impacts of climate change in the form of succinct paragraphs, scatter plot graphs, or tables. This technical, enumerated presentation is effective in describing the synthesis of data, but the sheer magnitude of the changes these kinds of reports suggest challenges a reader's ability to conceptualize the full extent of what such changes in the world's climate will entail. What does it mean that greater than 40 percent of terrestrial species may face extinction if business continues as usual through the year 2100? What would stronger hurricanes and higher grain prices *feel* like to someone living in the Pacific Northwest or West Africa or northern Europe? To articulate a plausible response to these questions requires a student to creatively embody a world that does not yet (and may not ever) exist. This imaginative embodiment forces students to confront and digest the disturbing emotions Norgaard outlines as central to climate denial.

Beyond engaging the emotional understandings of specific elements of scientific concepts through creative, future-oriented writing, these exercises can also link specific outcomes of climate change to the historic processes that are producing these results. To creatively imagine what a future world may look like in its particulars forces one to take a historical perspective that joins an imagined yet plausible future to the equally difficult to imagine past and present. A student who can imagine the potential ramifications of climate change and present these consequences as plausible to a reader has constructed an unknowable yet verisimilar world based on the student's scientific and cultural understanding of climate change. Creative-writing assignments that require a student to articulate a future vision of a world with a changed and changing climate are useful for fostering and measuring a student's ability to connect the reality of climate change to historical economic, political, and social processes as well as to ethical considerations.

What value does imagining the future hold for climate change pedagogy in higher education? My intuition and experience as a teacher tell me that having students creatively construct potential futures fifty to one hundred years from now produces a number of pedagogical benefits for those institutions and organizations committed to overcoming climate denial. Students are seldom asked to imagine the world as they think it *should be*. By creatively narrating possible futures, students exercise an open-ended, seldom-used form of creativity called "affirmative speculation."

In their 2012 anonymous manifesto, *Speculate This!*, the Uncertain Commons differentiates "firmative speculation" from "affirmative speculation." They assert, "Speculation is a form of knowledge" that "potentiates" different futures and presents relationships that bring about these futures.[8] To the Uncertain Commons, the world is "shaped by practices of speculation," such as "risk analysis, financial arbitrage, technological forecasting, and forward-looking institutions."[9] In short, "speculation is [their] zeitgeist." Yet these kinds of dominant speculative institutions practice a "firmative mode of speculation . . . which seeks to pin down, delimit, constrain and enclose" the future.[10]

Firmative speculation uses current trends and measurements to "extend the present forward into the future and backward into the past" in such a way that the future is jeopardized and sterilized in service of profit maximization and risk management in the present.[11] Firmative speculation yokes the future to the service of the economic present, managing and exploiting the future to maintain the current mechanisms and distributions of power.

Affirmative speculation, on the other hand, "functions and thrives by concerning itself with an uncertainty that must not be reduced to manageable certainties."[12] The value of this affirmative speculation lies in its potential to open up futures that can undo and redo how we perceive and act in the present:

> By definition, affirmative speculation lives by thinking in the vicinity of the unthinkable (rather than by asserting that the unthinkable is in principle always thinkable, knowable, calculable, and so on). As a mode of radical experimentation with the future, it experiments with those futures that are already here and now and yet are different from the here and now.[13]

If we accept the premise that humanely adapting to climate change requires imaginative solutions that radically break from unsustainable, carbon-intensive, economic development that has characterized modernity, then it seems to follow that students should gain proficiency and confidence in exploring the boundaries of their imaginations that we expect to furnish innovative adaptations to climate change. And further, if we accept the Uncertain Commons' argument that affirmative speculation undercuts the predatory, firmative speculation that forecloses possible futures, any affirmative speculation may be of in-

strumental worth in understanding and productively coping with climate change.

Although this kind of learning intervention seems a sufficient warrant for incorporating creative-writing assignments into climate change courses, I find the primary benefit of asking students to compose future narratives of global environmental crisis useful in the classroom because critically reading these narratives allows students to confront their own assumptions and values regarding climate change and social change through close reading of their imaginative texts.

In the remainder of this essay, I describe a particular future-envisioning exercise that I have I have facilitated variations of during class meetings of introductory environmental studies courses and of an upper-division environmental studies course titled Imagining Environmental Futures. These classes have explicit foci on issues of climate change, sustainability, and environmental degradation. As such, the students who perform these activities have at least some interest and background knowledge in climate change before they undertake the assignment. Interwoven into the description of this particular assignment, which asked students to articulate and critically interrogate an eco-utopia freed from global ecological crises, I limn the particular learning interventions I have interpreted from conducting and discussing this assignment with my students.

Description of Writing Exercise

Lesson title: Eco-utopia 2075
Time needed: 45–50 minutes in class
Number of students and classroom description: This writing exercise can be implemented in any classroom conducive to student-to-student interaction and individual writing. I have conducted this activity with as few as six students and as many as twenty-six students. The activity could be adapted for large classes and online classes.

Process

Students complete the written portion of this exercise during one class session. I begin this class session by glossing the significant environmental problems—chief among them being climate change—that we have studied in the course thus far. I note to students that much of our

learning process in an environmental studies course is bound up in the plight of Pandora, whose curiosity led her to open a box that contained all the evils in the world and who stood transfixed as all the problems of the world poured forth, revealing themselves to her. Pandora regained the ability to move only in time to trap Hope in the box for herself and for all humanity. Like Pandora, we must stand still to attend and regard the problems of the world; but also like Pandora, if we are to maintain any kind of hope, we must eventually act. I pose this writing exercise as an initiating bridge between education and action.[14]

I tell students that they will complete a timed creative-writing assignment that I will collect but not grade. The only rule I give the students is that they continue to write silently throughout the fifteen minutes I allot them. I then present an approximation of the following prompt:

We are turning to a very broad but important question: what is sustainability or sustainable development? This really begs the questions, "What do we want the earth to be like?" and "What is worth sustaining?" Imagine it is the year 2075; and to the joy of environmentalists, "sustainability" has become a reality . . . and to your eyes, this world is sustainable and good. What does this world look like? How do people live? Where do people live? What characterizes the way society looks? What is the political landscape, the environment, social situations? Are any of the major problems facing the world today completely ameliorated? Do any problems remain? Be creative, and consider what social or environmental problems have been eliminated and which persist in people's lives.

After fifteen minutes, I have the students stop writing and reread the pieces to themselves. Students synthesize and list the three greatest changes from their future world to the current world in bullet-point fashion at the end of their writing. I then have students read their fictive representations of an environmental utopia, either to the whole class (when in a small seminar) or within smaller groups (when in a larger class).

Let me pause in my description of the assignment to note what I see as the value of this activity thus far. First, I have asked students to move from considering the problems and issues that we have discussed in class (climate change, environmental racism, ocean acidification, etc.) to envisioning a world in which these momentous problems have been eliminated or seriously mitigated. While the exercise is purely fantastic, I find the process of being forced to focus on and articulate what the

manifestation of one's goals and aspirations might be a rare task for students. Environmental studies majors know that climate change poses serious threats, and they are almost universally and reductively "against it." But few are comfortable articulating what parts of the climate and their way of life they are *for* sustaining or reclaiming.

The curricula of most environmental studies courses are centered on the adumbration of particular sociohistoric *problems* and the sociohistoric roots of those problems. Students routinely crave and ask for "solutions" to the macabre parade of ills these courses relate to them. While it is obvious that it is not the role of a professor to instruct students as to the appropriate citizen-based strategy for solving climate change, helping students gain critical thinking skills does not equate to helping students think in creatively rigorous ways. Having students complete affirmative speculative tasks, even without the kind of subsequent discussion I outline below, allows students to exercise and play in the realm of what the Uncertain Commons call "affirmative speculation."

Student Discussions of Writing Exercise

After the students have an opportunity to share their eco-utopian visions with each other and list the major interventions of their utopias to the class, I ask a series of questions that lead students away from active imagining, active worlding, and toward critical, self-reflexive analysis of the class's utopian fictions. Before I ask the students these questions, I put to them the following argument:

What we have just done is imaginative and thus is fictional. As fiction, our own imaginative texts can be read much as any other text we have examined in this class. These short works of speculative fiction can help us investigate our values and our sense of reality while living through climate change.

After clarifying any questions about this argument, we move into a discussion of what these texts can tell us about ourselves and about our imaginative capacities to envision a particular (utopic) world within the contexts of the current world.

What I and my students find fascinating about these discussions is the remarkable consistency of tropes and figures found throughout the imagined eco-utopias. For example, in some students' utopias, glistening cities powered by abundant, clean electricity define the hopeful landscape. These techno-wonderlands echo a fantasy of ever-increasing

consumption without crippling environmental and social costs. Others see their paradise as a return to suburban or rural decentralized societies in which images of manual labor and the enjoyment of tight-knit community amid a sparsely populated pastoral take center stage. The third dominant trope I have read in the hundreds of utopias I have received from students is an eco-utopia wherein a radical resurgence of nonhuman nature enacts apocalypse, cleansing humanity to allow a severely depleted population to again live harmoniously with each other and the earth. Personally, I am not sure which of the latter two scenarios is more unsettling: the one where large urban populations simply vanish without comment or the scenario where bloody sacrifice of billions from some human- or nature-induced holocaust appears the preferred means forward.

The reoccurring patterns of responses imagining the future show the heteroglossic nature of articulating a coherent narrative in a timed setting. Mikhail Bakhtin describes novelistic narrative as a site of coexisting, conflicting fragments of different voices; that is to say narrative is both polyphonic and heteroglossic. When students are forced to quickly summon up a coherent future that is characterized as a utopia, they craft narratives that pose an *other* world in another's voice. The consistent tropes that seem to derive from various cultural and artistic discourses are the kinds of things that leap to mind and transfer to the page. Widely available cultural productions like science-fiction literature and film have sculpted the most common paths to a utopian future: the techno-abundance of Arthur C. Clarke's *Childhood's End* or Gene Roddenberry's *Star Trek*, the troubled agrarian pastoral of Earnest Collenbach's *Ecotopia* or Octavia Butler's *Parable of the Sower/Talents*, to say nothing of the myriad apocalyptic utopias provided by Margaret Atwood's *MaddAddam* trilogy or Lois Lowry's *The Giver*.[15]

Using these easily recognized tropes of science fiction, we may think of these kinds of future-oriented speculations as a kind of specular epideictic rhetoric. The act of articulating a utopia that is legible as the best of all possible worlds both to oneself and to a (at least nominally posited) reader seems to bring into utterance those problems, desires, and aspirations most central to the speaker and the speaker's culture. Like all utterances of epideictic rhetoric, articulating a utopia is an act of assigning praise and blame—an act that singles out aspects of our distributed lives for contemplation and renovation. The Uncertain Commons

claims, "Science fiction, too, is a way of opening up the future, affirming the possibility that things could be otherwise—its various scenarios and conceits less often about the future as such than about the present estranged from itself, released to uncertainty and the potential for radical difference."[16] It is therefore speculative but also specular, a metaphorical mirror image.

The mirror images these short pieces of speculative fiction hold are not windows onto a particular student's understanding of issues like climate change, nor are they reflections of a student's personal political commitments. Because the utopias emerge from the heteroglossic cultural channels perceived and recorded by the student in a timed setting, the mirrored image is a blurred reflection of cultural norms surrounding the future. Students who volunteer with the Coalition against Environmental Racism on our campus commonly are the same students who write in tacit favor of a cleansing, 5 billion-people-killing asteroid that will pave the way for a socially equitable future. Those most critical of capitalism and consumerism earlier in the course are just as likely to erect corporate cathedrals in the newest megacities as a marketing major writing across the room. Furthermore, many students simply omit any mention of climate change whatsoever. In the positive vision of the future, climate change is absent and not accounted for. Climate change has not been mitigated in these visions but rather omitted. Thus the value of this assignment lies precisely in the action of analyzing the inconsistency between students' knowledge of climate change and personal political commitments, on one hand, and the imaginative futures culturally available to students, on the other. Students readily see the conscribed nature of their imaginations in regards to a utopia, and they understand that these conscribed visions often seem to run counter to their emerging senses of political commitment. This exercise ultimately leads students to confronting, in experiential terms, the "failure of imagination" that Slavoj Žižek claims restrains meaningful responses to climate change.[17]

This experience of imaginative failure is yet another intervention that I deem valuable for climate education. While protests and other forms of transitional and counterhegemonic discourses proliferate the world over, there is a palpable inevitability and inexorability to climate change in my students' (and my own) imaginations. However, *feeling* this imaginative failure as someone interested in mitigating or adapting

to climate change is, to my mind, another matter. To imagine what one cannot imagine is paradoxical. Setting up the problem of imagining a utopia, which is both no space and true space, is to inhabit and experience the insolubility of this paradox. This kind of affirmative speculation "potentiates [new] knowledge" by unfixing naturalized (and downright gloomy) pathways for the future that students are given through forward-looking institutions and a throng of seemingly plausible dystopic and apocalyptic literatures.

After the class has discussed similarities in the utopias, I turn the discussion to gaps and differences between the different utopic iterations. I begin by asking a student who has eliminated poverty or achieved economic equality (there is always at least one) why this particular move was important for the *environmental* utopia. This can quickly lead to a useful refreshing of how affluence, as well as poverty, can lead to particular environmental ills. I then ask why some utopias are marked by social and economic equality while others make no mention of the issue or explicitly reject this as a goal for their utopia. Students who did not choose to redistribute wealth in their utopias tend to either (a) not demonstrate an understanding of the links between individuals' economic status and their exposure or contribution to environmental problems or (b) not see economic equality as a goal even a utopian world could deliver. For *every* student, some negative aspect of social conditions remains intact. In the timed triage of building a better planet, students say that they grasp at the aspects of the world they feel are most necessary and most able to be changed. Different students identify different naturalized social constructions in their utopias. Despite the diversity of values and aspirations we all have for what a beneficent future might hold, these dominant trends within these timed writing exercises underscore some of the troubling assumptions even those committed to progressive environmental and social change allow their imaginations to be governed by.

By this point in the class discussions, we are generally running short on time, and I close class by explaining how this exercise has allowed us to begin to imagine a future we would actually like to live in, as opposed to the dystopic visions of the future we are all used to consuming in education, art, and literature. I also say that the discussion of our writing has led us to exploring the connections between different social problems and processes that may or may not be malleable to human intervention.

By calling into question which issues are changeable and which are permanent or beyond human control, the class is left to consider how different social and environmental processes are bound up together.

By "announcing itself as apocalypse, environmental crisis has been debunked," but it also, in the words of Frederick Buell, "has resisted debunking."[18] Buell argues that apocalyptic rendering of environmental problems, from toxic waters to food shortages to climate change, has dominated environmentalist rhetoric and fictional depictions of environmental problems, but the twenty-first-century ongoing environmental crises may be becoming a normalized part of modern existence.[19]

The prospect of ongoing environmental crisis is palpable, but a sense of systematic, humane adaptation to these crises seems out of imaginative reach. Looking at utopias is not really about inventing the future *at all*; rather, it is a way in which we can interrogate our present values, assumptions, and knowledge. And I think this is a valuable task in service of answering our initial question: how can we begin to move past the dead-end imaginaries that trap us within disabling climate denial? Moreover, how can we imagine "the good life" for 7 billion people that does not overtax the earth's plenty? Even though, in the words of Žižek, it may be "easier to imagine the world than the end of capitalism," it seems the latter task is a more worthy project—not for the sake of *predicting* that future, as firmative speculative practice would have students do, but to begin to reimagine our view of the present through affirmative speculation.

ABOUT THE AUTHOR

Shane Donnelly Hall *is a doctoral candidate in the University of Oregon's Environmental Sciences, Studies, and Policy Program. He studies the links between armed conflict, environmental change, and social justice. He is the coeditor of Teaching Climate Change in the Environmental Humanities with Stephen Siperstein and Stephanie LeMenager (London: Routledge, forthcoming). As a graduate teaching fellow, Shane works with the University of Oregon's Teaching Effectiveness Program and teaches courses in both the Environmental Studies Program and the Department of English. His teaching focuses on introductions to climate change through humanities, social sciences, and natural science perspectives and extends to experimental upper-division courses in the environmental humanities.*

NOTES

1. Mora et al., *What We Know*, 1, 12, 16.
2. Norgaard, *Living in Denial*, 1–2.
3. Cohen, *States of Denial*, 266.
4. Lakoff, *Don't Think of an Elephant!*, 17.
5. Cohen, *States of Denial*, 249, 250.
6. Norgaard, *Living in Denial*, 223.
7. McKibben, "What the Warming World Needs."
8. Uncertain Commons, *Speculate This!*, 3.
9. Uncertain Commons, *Speculate This!*, 5.
10. Uncertain Commons, *Speculate This!*, 9.
11. Uncertain Commons, *Speculate This!*, 7–8.
12. Uncertain Commons, *Speculate This!*, 50.
13. Uncertain Commons, *Speculate This!*, 50.
14. Although I pitch this assignment by likening the students and myself to the curious Pandora, I began asking students to draft their own eco-utopias in response to the sense of dread many students developed throughout the course. In a recent environmental studies introductory course, twelve out of sixty-one students wrote that they were concerned that the course material would depress them when asked what general concerns they had about taking the course. I was expecting more apprehension over the midterm research paper or the amount of reading required per class. I interpret the despair many students already bring with them to these kinds of courses as underscoring the widespread, if politically muted, anxiety millennials feel about climate change and other global ecological problems. Students seem to understand that learning about climate change may be just as likely to feel disempowering (as with Pandora being fixed to stare at the evils of the world) as it may be empowering.
15. In some utterances of this writing assignment, I gloss Collenbach's conceit in *Ecotopia* as a means of showing students how utopic literature is a defined genre that environmentalists have long been interested in. I tend to refrain from discussing this text in any detail during this assignment because I teach in an institution at the heart of "Cascadia" and thus do not want to receive a large number of Callenbach imitations fifteen minutes later.
16. Uncertain Commons, *Speculate This!*, 50.
17. Žižek, "Living in End Times," 293.
18. Buell, *From Apocalypse to Way of Life*, xxi.
19. Buell, *From Apocalypse to Way of Life*, 44.

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