

Energy Imaginaries: Feminist and Decolonial Futures

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We understand nothing about impasses of the political without having an account of the production of the present.¹

One of the many radical changes inaugurated in the United States on January 20, 2017, was an environmental vision dramatically at odds with the COP21 agreement, which had dominated headlines only a year earlier.² Under the banner of “The Most Important Climate Stories in 2015,” *Wired* magazine led with “The Paris Agreement” and an image of the Eiffel Tower, explaining the significance of the fact that after twenty-one years of trying, 196 countries had come together to agree not only to a climate target but to the rather “lofty goal” of “keeping average global temperatures well below 2 degrees Celsius, and as close to 1.5 degrees Celsius as possible.”³ Now, with the Trump administration’s position on climate change, the commitments of the other 195 signatories to the climate agreement become all the more urgent. The competing interests articulated in these two moments of media spectacle can be read as figures for the ongoing impasse that defines current climate politics in North America and beyond — what I see as a result of an atrophy of the imagination that blockades transformative action. In this chapter, I explicitly relate the affective impasse of the politics of energy to its material production, reproduction, and uneven distribution, to ask: What does energy do? What is energy for? What from the age of oil is not working? And, most critically, for whom is it not working? More specifically, this chapter

triangulates the historically specific confluence of cultural, affective, and economic imaginaries by grounding this discussion in the world-after-oil that Jonathon Porritt creatively, albeit polemically, sketches out in his book *The World We Made: Alex McKay's Story from 2050* (2013). Through an intersectional feminist reading of this text, I illustrate the limits of current mainstream imaginaries, and I argue that taking leave of oil as our main energy source could provide opportunities to develop more socially just ways of living that put the concerns of those most exploited — women, people of color, and the global 99 percent — at the core of energy transition politics. What is required to achieve this is an energy transition that confronts and comes to terms with the systemic violences of the age of oil that rely on logics of white-supremacist-cis-heteropatriarchal-neoliberal-setter-colonial-petro capitalism deployed in the names of development, economic growth, energy security, and a host of other seemingly innocuous terms, which abstract the ongoing pillage of natural resources and the exploitation of bodies marked by race, class, and gender around the world. The antidote to these ways of thinking and being in the world is, to my mind, the reintroduction of Other knowledge systems and world views, including but not limited to feminist and Indigenous, which can help us collaboratively imagine and collectively move toward socially just — decolonized and feminist — energy futures.

Energy Impasse

We currently find ourselves at an impasse, unsure about how to transition to less carbon-intensive energy systems on the scale and within the timeframes required by the climate crisis. This energy impasse is the political, economic, and environmental deadlock created by the limits of Western ontologies and epistemologies that need to be newly thought. The task ahead is daunting, but is also rich with possibility. Instead of thinking of impasse as simply a “foreclosure of possibility,” it can be understood (as we in the *After Oil* collective have argued) as a moment of “radical indeterminacy... in which we might activate the potential obscured by business-as

usual.... This moment is the transition to a society after oil.”⁴ A society “after oil” does not imagine a world without any oil products, but rather a world that is not predominantly powered by fossil fuels; in other words a world whose social systems and cultures are no longer shaped by the relations of petro-capitalism but by alternative configurations of energy and political economy. Which energies power future economic and political systems, and how they give form to our lives, depend on how we think and mobilize through this impasse. The impasse is the outcome of a complex set of contradictions inherent to the political economy of fossil fuels. In short, the path to transition is laden with political blockades, largely of our own making, as we confront infrastructures and superstructures of a society mired in and largely committed to ways of being and doing that are, in and of themselves, the root cause of the current crisis: imperial extractivist cultural values and their related economic valuation. Creative energy solutions of all varieties — social, economic, political, techno-scientific — are being stymied by Western worldviews, which inevitably define the contours of our systems, social realities, and, therefore, in many cases, the limits of our imaginaries. How people embark on an energy transition in different local communities and at a global scale has the potential to either intensify the inequities that have been generated by oil-fuelled capitalism, or allow for the reintroduction of other non-patriarchal, non-Western ontologies erased by histories of conquest and domination in the interest of profit. Feminist, Indigenous, decolonial, and anti-capitalist visions for caring newly and differently for our ecologies can in turn create ecologies of care.

Many of the potential trajectories of the energy transition impasse are as yet unmapped and unmappable, as are their outcomes. To mobilize energy transition, therefore, demands the courage to act in the face of multiple unknowns. A transition away from fossil fuels has no template. There is insufficient knowledge of how we adopted earlier forms of energy and shaped our systems to suit those sources. Even when models of transition exist, they prove inadequate to the

current challenge: never before in human history have we had to make an intentional energy transition on a global scale at such speed. We have an unreliable understanding of energy histories, and the ecologies of the future are taking shape in often unpredictable ways. These unknowns are disconcerting and destabilizing. But it's precisely for these reasons that affect has an important role to play in energy transition, as it so clearly does in the many current efforts to resist or deny the need for change. Any materialist critique that fails to account for affective production will fail to fully conceptualize the impasse we find ourselves in. Without a comprehensive understanding of past energy transition, we must have, as Lauren Berlant counsels in *Cruel Optimism*, an "account of the production of the present" to imagine an alternate future.⁵

It is in this light that Porritt's *The World We Made* is of interest, not for the vision of the future it promotes but for the fact that the future imagined in the book captures and illustrates the dangerous and irresponsible ideas that dominate our contemporary mainstream media and political discourses. Porritt's future is grounded in the *zeitgeist* that promotes incremental technological and economic solutions as all that are needed to manage the current environmental crisis. It is a fantasy that promises those of us in the West that we will be able to conveniently replace one form of energy for another and continue to live as we always have. This self-serving vision is increasingly informing both right- and left-leaning political and economic corporate and government practices and policies, gaining support among leading capitalists and entrepreneurs around the world.⁶ The flawed fantasy of *The World We Made* is one of radical sameness — business as usual disguised as radical innovation — that does not account for the different paths that alternative energy production can and will necessarily forge. Nor does it express any self-awareness of how privately controlled paths constrain the ways that we might imagine commonly held alternative energy.

It is urgent and necessary to identify and unmask those imaginaries, of which *The World We Made* is only one example, that

limit the possibility of the moment by promising to salvage the “benefits” of the age of oil. The benefactors of such imaginaries are largely found in the Global North; thus the flip side of their promise is, of course, the perpetuation of the inequities of the age of oil suffered by the most precarious citizens (women, children, people of color, and those located in the Global South). In undertaking an analysis of these imaginaries, it is critical to interrogate successful visual and textual rhetorical strategies being deployed to dominate specific energy transition directives, in order to reorient them to promote other energy transition possibilities. These could help to build the interest and momentum necessary to trigger a more socially just energy transition informed by a range of feminist and Indigenous knowledges, and allow those 195 countries to realize not just a 1.5 degree target, but new futures organized differently around other energy sources. In so doing, we can begin to collaboratively uncover past stories and weave future narratives that reintegrate feminist (at times possibly Marxist-feminist) and Indigenous knowledges and histories that have been scrubbed from patriarchal capitalist accounts of the present.

The ontologies of modernity that have shaped the global present limit our ability to imagine other futures. For women, Indigenous people, and for most in the Global South, these ways of thinking the world are not of our own making; they have been passed down to us and have now been proven obsolete. Prevailing modern logics have been, through time, sanitized of non-patriarchal modes of thinking and being, namely feminist and Indigenous modes. While some of these date back millennia, grounded in religious and cultural beliefs about what it means to be human and to live in society, much of what we have inherited are products of Western Enlightenment modes of relating to the world.⁷ Cartesian dualism nurtured a worldview that separated mind from body, human beings from nature and from one another, resulting in racial and gender subjugation, conquest, and colonialism. Adam Smith’s vision of social and moral harmony through self-interest was radicalized and formalized into Rational Choice

theory. Then there are the scientific (and pseudo-scientific) notions of survival of the fittest that have fed notions of economic competition between individuals, classes, and nation states. Likewise, Keynesian models of utopian progress and economic growth are just some of the many theories and worldviews that inform our current Western realities, with our high standards of living and our excessive and consumption-heavy ways of being.⁸ Starting with Westphalia in 1648, modern humans have reproduced the nation-state structure rather than the historically small local communities organized through social obligations to family and community. These post-Westphalian logics were (and continue to be) organized around control of labor forces, nature, and resources. They were (and are) intended to strengthen the nation state and, at least at the level of ideology, to benefit the body politic. However, in a less abstracted sense, they also function for the profit of an elite few. These logics were never formulated to function cohesively on a planetary scale. Therefore, new logics are needed to address global governance within a generation or two from inside our current conundrum and without the luxury of objectivity or distance.

Art, Research Creation, and Positive Affect: Strategies for the Impasse

As both members of local communities and as part of a larger global network of systems, we must aim to collectively move from knowledge to transformation (knowledge => transformation) before all of our creative energy and will to transform has burned out or, as Lauren Berlant says, before “the situation destroys its subjects or finds a way to appear as merely a steady hum of livable crisis.”⁹ In an effort to motivate change, environmental campaigns have presented us with endless facts, stories, and images of climate crisis and our own destructive potential. Despite herculean efforts on the part of many progressive individuals and organizations around the world, nations and their populations seem incapacitated to (re)act. The significant shifts required of us at the scale necessary — from global governance (both in terms of the policies produced, as well as the role of the

nation state, which is proving inadequate to the challenge) to the reproduction of daily life — have simply not occurred. Business as usual carries on and, in fact, economic crisis is exploited as profitable opportunity, manufacturing endless needs/desires and greenhouse gases.

These grim realities and our failure to respond adequately have provided a heightened awareness of the disjuncture between knowledge and transformation. As Slavoj Žižek has articulated so brutally, riffing on Fredric Jameson, “it seems easier to imagine the ‘end of the world’ than a far more modest change in the mode of production, as if liberal capitalism is the ‘real’ that will somehow survive even under conditions of a global ecological catastrophe.”¹⁰ However, I’d argue that doomsday eco-narratives are not working to produce fundamental change. In “It’s Not Climate Change, It’s Everything Change,” Margaret Atwood, one of Canada’s greatest living novelists and an avid advocate for the environment, creatively outlines a range of competing optimistic and pessimistic future narratives. Positioning hopeful and foreboding visions against one another, and in relationship to what is needed next, Atwood’s essay taps into potential solutions — some of which already exist and others that are emerging.¹¹ Similarly, scholar Stephanie LeMenager rightly articulates, in theoretical terms in *Living Oil*, “the relay of media → empathy → action.”¹² From a feminist or Indigenous perspective, empathy, not just knowledge, clearly plays a role in action or stasis. In fact, the potential of positive affect (such as empathy), deployed from a right-of-center perspective, has been instrumental in creating the current moment, whether for ideological and political ends or as part of advertising campaigns promoting consumer lifestyle as the key to happiness and satisfaction. Recent strategies by environmental activists and artists have, likewise, experimented with more positive affective visual and textual narratives that allow room to imagine our way out of the current conundrum.

One of the first and most extensive examples of this tactic — to mobilize optimism and happiness in relationship to climate change

— is Jonathon Porritt’s fiscally and politically conservative vision for environmental mitigation and sustainable capitalism in *The World We Made*.¹³ In a 2013 CBS interview, Porritt claims that through this book he has attempted to engage people’s affect to make environmental issues “personal” (that is, accessible).¹⁴ Indeed, Porritt’s fictional scrapbook aims at moving us through the impasse caused, in part, by what LeMenager has termed “petromelancholia”: the grief felt for the end of (petro-)modernity and our collective mourning for the loss of cheap and easily accessible oil (in a time before tar sands extraction, ultra-deep ocean and ice/Arctic drilling, and fracking). As a creative research project of the future, *The World We Made* aims to creatively bridge the gap between knowledge and transformation by addressing the petromelancholia that leaves us immobilized: subverting these feelings with positive affect — with optimism.

As a variation on what Naomi Oreskes and Eric M. Conway have termed a science-fiction historical novel — or more specifically a collective science-fiction historical scrapbook — this book makes full use of visual and textual rhetoric, addressing both the age of oil and arguably the age of the image, as photography is itself a product of oil.¹⁵ Published by Phaidon, this research-creation piece also aims to attract an audience interested in art and high culture. The story is narrated by fictional character Alex McKay and his students, reaching from 2050 all the way back to the year of McKay’s birth in 2000, but focusing on the last nineteen years of his career.¹⁶ It makes use of its multi-genre platform of text/story and artwork. A bright sunny yellow cover that parallels the positive science-based vision of the future wraps around graphs, maps, hand-drawn sketches, aerial photography, microphotography, handwritten notes, blueprints, copies of posters, magazine covers, manifestos, and other political materials. The combination of text and image not only narrates but visualizes for readers and audiences a future already physically mapped out in vivid color. Published in October 2013, the story flirts with nonfiction, including endnotes and an index of researched materials, weaving together seamlessly the speculative elements

with existing technological experiments around the world. At this level, the book plays a game with readers: it allows for — demands even — an interactive engagement with a wide range of issues related to environmental reform. Porritt creates a sense of urgency around addressing the looming environmental crisis through the insertion of fictional responses, critical to achieving eventual success, which are integrated into the near future of the story's chronology (almost simultaneous to the book's publication in 2013).

On one hand, this book creates a space for us to imagine something other than a blind destructive forward march toward apocalypse. There is much to be learned from this book, in terms of form, and its use of art, photography, creative research, and positive affect — techniques that might ideally be employed to other more progressive ends, to help readers imagine other futures. On the other hand, while this book is a model for what art and creativity can contribute to imagining and driving change, it is simultaneously a cautionary tale.

The World We Made: Flawed Imaginaries of Life After Oil

The impasse demands new imaginaries. Futurecasting, in whatever form it takes — art, literature, film, the mainstream media — often illustrates the limits of our imaginaries. What poses as innovation in energy and environmental discourses is too often, upon closer reading, a mere repackaged/re-glossaried perpetuation of petro-capitalist relations greenwashed with tech solutions, fulfilling Jameson's claim that narratives of the future are actually rearticulations of the present. In "Progress Versus Utopia, Or, Can We Imagine the Future?" he explains that science fiction's "deepest vocation is over and over again to demonstrate and to dramatize our incapacity to imagine the future... the atrophy in our time of what Marcuse has called the utopian imagination, the imagination of otherness and radical difference." He goes on to conclude that science fiction ends up becoming a mediation, willingly or not, "of our own absolute limits."¹⁷

Read critically, *The World We Made* exposes the limitations of the increasingly accepted, if misguided, vision of the future whereby

anxiety around the disappearance of oil is turned on its head and supplanted with fetishized notions of alternative energy, aiming to sustain the webs of relations, as though alternative energies will cause very few disruptions to the middle-class standard of living, worldviews, or ways of being. What we must be careful to remember in our rush to implement alternative energy systems, as though they in and of themselves hold the key to cleaner and therefore more socially just futures, is that energy itself does not create transformation. It is the valuation of energy sources and the ways in which they are socially, economically, and politically integrated that will be transformative. Oil did not create climate change, although it is often fetishized as the “stuff” of life that produces not only wealth but also war and a host of other dehumanizing outcomes.¹⁸ Moreover, according to David Harvey, “‘resources’ can be defined only in relationship to the mode of production which seeks to make use of them, and which simultaneously ‘produces’ them through both the physical and mental activity of the users.”¹⁹ In short, capitalist practices that use oil to fuel growth, and not oil in and of itself, have created greenhouse gas emissions on a scale sufficient to alter the climate. In Porritt’s imagined future, solar and wind farms fuel the “good life.” Technological solutions are promoted as the main way to address climate change in *The World We Made*, much as in popular discourse and in the halls of power, despite the inadequacy of tech alone to address the core causes of climate change. In the book, air travel caps are in place and “slow travel air cruisers” exist. Virtual tourism is a \$500 billion dollar industry that provides a full sensory experience through internet and second life platforms. In this future, the virtual is described as augmenting the real.²⁰

Communications technologies, in fact, feature as the solution to the restrictions on mobility described in the book, without accounting for their resource intensive materiality. Alex McKay’s home, for example, includes a media room with two video walls that serve multiple purposes: one a background to suit the mood, the other a means to communicate with and maintain relationships with friends

and family.²¹ This vision of the future is troubling at several levels: it reproduces the social atomization of early twenty-first century life, rather than designing more communal ways of being; it sustains people's distance from the outer world including nature, rather than developing more intimate relationships with the environment; but at a basic environmental level, the energy intensity required to sustain this type of virtual life is problematic.²² Popular conceptions of wireless communication technologies render them immaterial and invisible, when in reality the infrastructure of servers and cable networks that power and disseminate virtual worlds are resource intensive, using enormous amounts of energy and water. In an ironic reversal, the sci-fi nightmares of isolation in Ray Bradbury, E.M. Forster, Kurt Vonnegut, and Philip K. Dick and the sociological anomie of the theorists of alienation (especially Herbert Marcuse) are here presented as positive and, indeed, not only desirable but ecological. The social-atomization-presented-as-luxury is a naïve fetish of the commodity à la *Debord*. Screens and communications equipment are taken to be wondrous manifestations of social relations, while they actually inhibit the formation of community-based relationships. Porritt mistakes the symptoms of the worldwide division of labor for the solution to globalization's problems. Furthermore, as Mél Hogan's research explicitly details, virtual realities and big data, not to mention surveillance and privacy, "can never be disconnected from the material infrastructures that allow and render natural the epistemological state of mass surveillance."²³ As her analyses make blatant, social media companies, surveillance, and big data are all "deeply material."²⁴ The greening of big data is part of a particular worldview invested in solving the problem of our carbon-intensive (auto)mobile lives through communications technology, without recognizing the corresponding footprint. This is just one example of how technological solutions allow for a sleight of hand, whereby those aspects of daily life we associate with high emissions (daily commutes and air travel) are replaced by what we assume are low-energy solutions (paperless practices and wireless communication),

without accounting for the energy required to sustain these tech habits at the level of manufacturing — which is the largest cause of global emissions. Even if alternative energy could fuel all of the energy demands of this high-tech virtual life, the production, distribution, and maintenance of solar panels on the scale needed would be a massive industrial project, not without a significant environmental footprint.²⁵ All energy sources have their limits, which puts a fine point on the fact that even a transition to more renewable energy sources still requires radical social and cultural adjustments in regards to our relationship with energy: how much we use and for what purposes. The issue at stake is not our energy sources but our excessive and unabating appetite for energy consumption.

I argue that Porritt's optimistic future falls under the category of "cruel optimism." This is Berlant's term for "the condition of maintaining an attachment to a significantly problematic object," which looks optimistic but in reality limits our ability to flourish.²⁶ For Porritt, the object of attachment is capitalism, with its high-tech immaterial fetishes that disavow labor as the ongoing source of value, which are bound up in what Berlant defines as the good-life fantasy. This fantasy harks back to Aristotelian notions of a moral and happy life over the long term; in Berlant's analysis, however, the fantasy is gutted of its authenticity, and we are living in constant pursuit of a dream that remains somehow out of reach. In her critique, she details how this chimera of late monopoly capitalism has produced precarity and disparity, the very antithesis of the promise of the American Dream: the twentieth-century mirage, made possible by fossil-fueled capitalism. Practices of lending and borrowing have created a new class able to own cars and homes. Oil's energy density facilitated mobility, (sub)urban sprawl, and high-speed communication, all of which have reified the illusion of individual autonomy. Perhaps most important to this fantasy is the illusion that the successes of the "self-made man" are the result of *his* own choices — with little regard for the ways that the conditions for *his* success are entirely facilitated by the collective infrastructures of cities, roadways, and

telecommunication networks intended to support a vision of white middle-class America (and Canada), built on the heteronormative nuclear family. Porritt's imagined future sustains the American Dream into the mid-twenty-first century — Capitalism 2.0 — by imagining ways to salvage capitalism and the environment as though the survival of one is not reliant on the destruction of the other.

Instead, Porritt's text touts these technology fixes to the way we live and move about the world as not only sufficient to mitigate climate change, but as positive in other respects, such as contributing to "Gross Domestic Happiness."²⁷ On the inside cover, the character Alex McKay writes that, in 2050, "the world's countries are both more stable and more content." Overall, happiness is a pervasive message throughout the book that affirms the future is generally a more fair and happier place, linked to more cooperative models of capitalism. The chapter, "Work, Wealth and Wellbeing" includes a chart illustrating how the hours of work demanded each week in the European Union have been significantly reduced from 38.2 in 1995 to 24.8 in 2045.²⁸ As a result, the future is a generally happier place.²⁹ McKay says, "By the early 2020s that age of selfish consumerism was over, personal ownership became much less important, while renting, sharing, swapping and bartering became the new norm."³⁰ This rhetoric, however, is not upheld by events as played out in the narrative. For example, the car-share program, which suggests a cooperative initiative, is, in fact, run by a capitalist for-profit organization. The work McKay does in the community garden is also part of a for-profit TimeBank project that pays through local currency. On first read, this TimeBank suggests a renegotiation of social-economic relations: a contribution of time to communal projects for the collective good. But exchanging labor for a local currency (wages) maintains a specific capitalist relation, rendering moot a shortened workweek, if a second job at the community garden is an imperative: McKay does "25 hours of work each week as a teacher, another 5 hours (unpaid) as a governor of another school, and then about 10 hours a week on different activities — coordinated through our very active local TimeBank and paid in

local pound — including working on our Community Farm.”³¹ Porritt proclaims the value of the shortened workweek, only to elaborate that citizens in 2050 are actually working more or less the same amount of hours, simply being paid less in regular currencies and more in local currencies, which ideally supports local economies, but which, of course, would forcibly limit mobility for certain members of society, while other more affluent members would be able to convert surplus local dollars to more widely accepted currencies. Furthermore, this exploration of a secondary local economy, where value is linked to labor time, fails in that it continues to reproduce capitalist relations. The capitalist mantra “time is money” literally becomes formalized through this imagined time-based currency: it is a solution not dissimilar from the nineteenth-century Proudhonist time-chits that Marx himself critiqued.³² This future vision of labor, however, is further complicated by the fact that certain types of labor (that is, those performed outside the twenty-five-hour workweek), are reframed as leisure. And, ironically, it is some of the most labor intensive forms of classical labor — gardening and farming — that are reinvented. It was this very labor that the promise of technology was meant to save people from having to perform. Once again, the status quo is sold as innovation. This future text imagines an idyllic relationship to the land and to food-systems.

This fantasy remobilizes eighteenth-century romantic notions of nature that grew out of the first industrial revolution. Porritt’s future — like many imaginaries of the future driven by capitalist imperatives to maintain as much as possible of existing systems of domination and extraction of resources and labor — feeds into notions of the entrepreneurial spirit of the late twentieth and early twenty-first centuries that leave the majority of the world’s population living more precarious lives, working more for less remuneration, striving to claim as their prize not only greater material comfort but the ever-elusive promise of more free time. But free time is on the decline in the present and seems not really to exist in this future imaginary either; despite the narrator’s assertions to the contrary, simple mathematics

unravel this claim. Porritt's vision greenwashes an invocation of present employment conditions in the West that are increasingly contractual, precarious, and inadequate.

In short, the concepts of high-speed communication and slow travel technologies are mobilized as solutions to the energy and environmental climate crisis in very specific ways that protect what is really at stake: capitalism itself. Porritt's future world is founded on an ideological belief that capitalism is the only economic system that can address the current crisis, what he calls "the least worst economic system we have."³³ His claim is that the current system merely needs to be tamed (which is the title of one of the later chapters "Taming our Capital Markets"). In his nonfiction book called *Capitalism: As if the World Matters* (2005), he uses the term "sustainable capitalism" to define a tamer version of existing market dynamics. However, Porritt's representation of the relationship between the cooperative commons and capitalism are conflicted. There is an uneasy relationship between the loyalty that he maintains to the capitalist paradigm, his desire to expose its failings, and the extreme injustices it has created in our time — if not the future. In the future world of Alex McKay, capitalism's failings are mitigated at the local level through community-based sharing initiatives. Multinational corporations are disciplined by the market when entrepreneurs realize it is profitable to behave in environmentally sustainable ways. McKay explains that

There are still plenty of very successful multinationals — although fewer and fewer every year, it has to be said, as people around the world show their preference for more local and national businesses.... So capitalism is still thriving, but in a very different way from 30 or 40 years ago. Nobody planned it that way... [but] given where we are now, something about today's more sustainable version of capitalism must be working.³⁴

In this future narrative, a reconfiguration of the market is represented as a "natural" outcome of the self-regulating mechanisms of

capitalism — the invisible hand — rather than as part of political will.³⁵ Meanwhile, the inequities of the future are reported rather unselfconsciously as imperfections of the system that we can all feel guilty about, but which are inevitably part of a common-sense understanding of reality under capitalism. Much like combined and uneven development in the present, Porritt's vision relies upon the erasure, or at best subsistence, of large parts of the planet to ensure safe, quiet (almost pastoral) lives within cities in the disambiguated West.³⁶

What Porritt's book illustrates best are the ways an uncritically affective, cruelly optimistic loyalty to capitalism will limit our possibility to imagine new systems. The optimism of cooperative capitalism sustains itself on innovations as no more novel than private property, entrepreneurship, profit, and perhaps most strikingly, the unselfconscious need to maintain the inequities inherent to capitalist relations. For example, in *The World We Made*, solar energy is considered a source of capital. It is described in terms that fall under private capture of solar energy, much like existing systems in California, where solar panel owners are able to manage their own energy needs and sell any excess energy back to the grid. This is not a social commons model for energy management. Rather, it is an enterprising system where those with capital — in this case privately owned solar panels — can benefit and enclose, develop and exploit what could otherwise become common solar resources as a revenue generating initiative to subsidize privileged lives, while others are shut out. In twenty-first century North America, energy commons project (or publicly owned utilities) are often discussed as impossible, or even radical.³⁷ This is, however, symptomatic of our ahistorical posture — trying to make change from within a system that we cannot step out of — because until quite recently (into the 1980s and 1990s in Canada, for example), utilities were largely government owned. Profits fed back into social programming: roads, schools, and so on. Porritt's future plays on a worldview that takes as a given that solutions are found in free markets. While it might appear optimistic to readers of the "rich

world” to believe that the current climate crisis provides opportunities to be seized, it is a vision sustained on the grim miseries of resource shortages, displacement, and ultimately death for a vast percentage of the world population.³⁸ As Porritt puts his theories into practical — if imagined — application, the world that unfolds reveals the contours and limits of a vision that brushes over but fundamentally relies on the slow violence of environmental devastation, particularly as they manifest under capitalism (cooperative or not), exposing upon closer reading the cruelty of his optimism.

The coming energy transition will demand much more of us than simply the use of alternative energies. Neither can it be solved with technical or economic solutions alone. *What does energy do?* It shapes the societies we build, create, and live in; an energy transition is therefore also social and cultural. As such, it is not solely the responsibility of individuals. Transformation demands collective political action and an associated social movement that will hold industry and government to task — not to mention individual citizens who will have to radically transform their habits and ways of being. An energy transition adequate to the challenges of climate change demands of us the complete reinvention of daily-lived reality. We must rethink everything from the clothes we wear, to where those clothes are manufactured, to what we eat and where it is grown, to how we wash those clothes and dishes, to how we collect and use natural resources including water, solar, and wind — and ultimately how, and how fast (or slow), we move about in the world and how we live together in community: sharing our food, energy, shelter, labor, and lives. In short, an energy transition requires us to exchange what Ruth Irwin has described as our solipsistic, modernist, and consumerist worldview, which “foreshortens our imagination and ability to find alternatives,” for an “integrated, embodied, future oriented ‘world-scape.’”³⁹ Imaginaries of a future, where technology allows for only modestly transformed lives, are part of a larger project concerned with maintaining capitalism.

While Porritt might have intended his book as a contribution to the

deployment of optimism as a strategy, this book should be seen as a lens onto the present that exposes the cruelty of the optimistic sales pitch of sustainable capitalism, which relies on unevenly distributed slow violences of capitalism and climate crisis. This fictional account illustrates beautifully (the text itself something of an *objet d'art*) that the fulcrum of sustainable capitalism is capitalism itself — sustaining capitalism — not the environment or even human life.

Wasted Lives and Troubling Erasures: Decolonization and Feminism⁴⁰

In the future world of Alex McKay, capitalism's failings are mitigated or managed.⁴¹ Within the book's global context, gender and racial inequities are unselfconsciously reproduced as the outcomes of national mismanagement. There is some acknowledgement, to be fair, of the environmental struggles that will be faced by people in developing nations as a result of climate change, but the issues of race, class, and gender in the West are largely absent, with only a passing (troubling) reference to Canada's oil sands.

The book foretells a rather unimaginative re-invocation of the past as future, through a neocolonial project that demands that African countries again reclaim their sovereignty:

Initially, this expansion was driven by what was described as “the worst resurgence of colonialism since the time of slavery,” as both the big agri-tech companies and the land-hungry countries like China and Saudi Arabia bought up vast tracts of productive land in Africa.... But all that “land-grabbing” came to a dramatic end after the Great Famine in 2025, as one African country after another took back control of its own land.⁴²

In the scrapbook, poverty is mitigated but not eliminated. In fact, the numbers of the poor have increased, “but the lives they lead today are very much more comfortable than 30 years ago and fewer than half a billion are now living in absolute poverty.”⁴³ A Solar Salvation scheme

in Nigeria is described as “an extraordinarily generous commitment,” and so, while Porritt claims elsewhere in the book that the need for charity has been eliminated, the economic relations of the rich world and poor world maintain very similar geographies to the present, and the language of aid and “generosity” reproduce current global power relations.⁴⁴ Nigeria is no less short of sunlight than it is of oil and yet the country is clearly not thriving within the continued capitalist relations of the mid-twenty-first century. The narrator acknowledges the injustice of these events, but accepts these as historical struggles that have been resolved. This narrative strategy leapfrogs the impasse of the present, in all its complexities and potential for building knowledge toward other outcomes that has not yet been imagined. What’s skipped over is precisely what Berlant articulates as an activity of living that demands “a wandering absorptive awareness and a hypervigilance that collects material that might help to clarify things, maintain one’s sea legs, and coordinate the standard melodramatic crises with those processes that have not yet found their genre of event.”⁴⁵ This leapfrogging leads to the enclosure of other possibilities that might be produced by thoughtfully exploring decolonialization and reintegrating feminist thinking into future systems.

When the narrator does mention the tar sands, the foreclosures of Porritt’s sustainable capitalist future are violently articulated as the ecocidal and genocidal project of extractivist Canadian politics. McKay describes “a disastrous release of waste water from one of the largest tar sands operations, contaminated with mercury, lead and other toxic elements, killed off almost every living creature along a 160-kilometre stretch of the Athabasca river. It’s taken the Athabasca a full 30 years to recover.”⁴⁶ What such “recovery” after death looks like in the landscape after thirty years is not detailed. This ambiguous vision for the future feeds into concepts of “reclamation” that are part of larger discourses of scientific and managerial control. Such techniques are grounded in the colonial worldview of *terra nullius* that continue to justify the claiming and settling of land in what is now recognized as Canada. Just as a wetland cannot be reconstituted,

neither can there be ‘recovery’ from death and genocide, whether it is the extermination of flora, fauna, or human species. Furthermore, the concept of *claiming* or *reclaiming* the land raises the question: claiming for whom? Given the historical context, it is only wise to be skeptical of any project that claims or reclaims territory. Many real-world reclamation projects in Northern Alberta take what were once wetlands belonging to Indigenous communities and transforms them first by extracting the oil and then by landscaping them into new environments much better suited for living and building on — settling — than the original wetlands.

In the fictional rendition provided by the story, the deadly tailings-pond breach compromises 160 kilometers of downstream territory that includes Indigenous communities such as Fort McKay, Fort Chipewyan, and others beyond, many of which are using treaty rights as a mechanism to resist the ongoing colonization of their lands by government and industry. Rather than acknowledging the historical and ongoing struggles of these communities, who are being brutally impacted by the violences of late capitalist oil production *right now*, the book enacts an eco-genocide of Indigenous communities, mentioning only their erasure as part of the inevitable fallout of oil extraction and petro-politics — not as a result of ongoing capitalist relations. No mentions of land and treaty issues or pipeline blockades are raised. Instead, dissenting Indigenous voices are silenced through exclusion from the text overall, erased from the land by a tailings bond breach.

Capitalism and the project of modernity (mobilized by the modern nation state) require as their prerequisite the erasure of certain bodies. In Canada, for example, colonial logics have produced and continue to perpetuate cultural genocide, displacing Indigenous peoples to reserves, forcibly removing their children from homes and communities (first in the form of residential schools and later as part of the Sixties Scoop and ongoingly through child protective services and policies) and by continuously disregarding land and treaty rights into the present in the rush to “develop” minerals and resources. In recent years, over twelve hundred Missing and

Murdered Indigenous Women (MMIW) have been documented. The mere existence of Indigenous women, argues Audra Simpson, is an affront to the colonial project, since they are the historical owners/guardians of the resource and oil-rich lands now occupied by settler Canadians. In short, the exploitations of the age of oil fueled by carbon intensive energy are not simply the result of a disconnect from the environment and other species. These exploitative attitudes are reified in the relationships between people as well, whereby some classes and cultures of people believe themselves to be superior to others, resulting in the extraction of labor for surplus value, and ultimately the dehumanization of those who become a barrier to profit margins — which in its most extreme form results in the murder and genocide of those deemed superfluous.

Porritt's storified version of the future exemplifies a dominant strand in environmentalism. Many green capitalists of his ilk are unwilling to muddy accepted narratives of progress. As such, they gloss over the systemic violences intrinsic to any colonial project that, by definition, demands territorial takeover and the displacement of peoples. Porritt fetishizes the systemic violence of the past (our present) as the outcomes of oil and not as intrinsic to logics he aspires to maintain, namely capitalism; meanwhile Porritt imagines the violences of the future as being in the service of progress toward greater equality among those who survive — a perpetually elusive promise. The logics of colonialism that are evidently still in operation in these imagined futures cannot be resolved under capitalism, because one is dependent on the other in its reliance on the exploitation of labor and resources for the accumulation of capital. *The World We Made* illustrates our failure to imagine new futures, given that these futures mirror post-World War II independence movements that failed to achieve autonomy, as nineteenth- and twentieth-century nation-to-nation (colony-to-empire) relationships were replaced by alliances with multinational corporations.

Oil is a Feminist Issue. Energy Transition is a Feminist Issue

In *The World We Made* one of the few references to women is in relationship to population control — a strategy aimed at controlling the bodies of women, largely women of color in developing nations. In omitting women and their perspectives, the book reproduces the marginalized status of women around the world, along with the many ongoing struggles of race, class, and Indigenous rights. Porritt writes these issues out of the historical account of sustainable capitalism, much as these perspectives have been written out of the official historical record. The category of “woman” is, of course, diverse and fraught, given the “viscous porosity” unacknowledged by classic dualistic ontologies of nature/culture, sex/gender, and so on that require a rematerialization of the social that “takes seriously the agency of the natural.”⁴⁷ All of this means that different categories of women are impacted differently by the networks of oil. However, Porritt’s text lacks even a basic awareness of how the culturally constructed relationships between women and things — many of them either products of the petrochemical industry and/or powered by oil — directly shaped women’s lives in the early twenty-first century: the ways in which spectacles of resistance continue to be performed by or draped on the female body. From the runways of high fashion to the hallways of high schools in popular culture and late capitalism, women’s images, and women as a concept, are widely recuperated to drive consumerism and to serve national petro-politics and imperial expansionist aims.⁴⁸ Porritt’s text also fails to acknowledge eco-feminist theories that aim for greater gains in a post-oil culture.

The discussion of population control becomes a key moment for the text to redefine the term *environmentalist*, reclaiming it for fiscal conservatives invested in mitigating environmental damage as an opportunity to reinvent and sustain capitalism. In the text, abusive language is used to deride the “not just stupid, but cruel” approach of that “great army of environmentalists and left-wing

politicians in Western countries... [who thought] the real issues were poverty, injustice and overconsumption” — not population control.⁴⁹ Through this naïve pop-Malthusianism, the book project, and the project of sustainable capitalism are de-linked from other “radical” environmental movements. In the context of this story, radical comes to name any movement interested in transforming the social and power relations of late capitalism, making it quite explicit that sustainable capitalism is about redirecting environmental concerns away from any vision of the future that will disrupt not only capitalist accumulation, but its patriarchal, heteronormative, white racialized bedrock.

For important historical reasons, many feminist environmentalists resist discourses around population control, refusing to accept that women’s sexuality be controlled by patriarchal logics, institutions, and socially held values that limit a woman’s control over her own body without first demanding social changes on the part of both men and women. Population control discourses perpetuate women’s alienation from their bodies, imposed by patriarchal cultural values and norms.⁵⁰ It has been over a quarter of a century since Marxist-feminist scholars Vandana Shiva and Maria Mies articulated ecological concerns as feminist issues. They challenged ecofeminists to “see the devastation of the earth and her beings by the corporate warriors, as feminist concerns,” since “it is the same masculinist mentality which would deny” women the right to their “own bodies and [their] our own sexuality, and which depends on multiple systems of dominance and state power to have its way.”⁵¹ The thinking of Shiva and Mies, combined with Berlant’s more recent theorization of cruel optimism — which analyses how people adapt to crisis over time, seeing it as ordinary and integrating the contradictions into their own social relations as part of a new normal — demand that as twenty-first century moderns we step away from current reality to take a long hard look at how we have adapted ourselves to ideas that in themselves are so contradictory that they can do nothing but perpetuate the status quo, while we continue to act as if these same ideas have the

potential to mobilize radical transformations. Once again, promises of innovation are used to sell the status quo; the emperor has no clothes. This myopia requires that the world be assessed from new perspectives, namely feminist ones. The environmental movement has, in fact, been identified as a women's rights and feminist movement.⁵² However, the blanket identification in Porritt's book of Other perspectives as radical strategically undermines both feminist movements and progressive environmental resistance movements, many of which are led by women activists and Indigenous communities around the world.

In short, women and feminists are virtually absent from this history of the future — exactly as they are from the historical accounts to date: those stories and records that have disrupted our ability to archive and build feminist knowledges across generations and cultures. To reinvigorate feminist knowledge in the present and future, we can look to examples of other feminist cultures, such as the traditional (historical) feminist practices within European cultures largely erased by the witch hunts, the enclosures of the commons, colonization, and capitalism.⁵³ Many Indigenous communities also provide other models of thinking through gender identities, kinship, and community relationships. These knowledges working symbiotically will provide new entryways to rethinking our relationships to each other, to our communities, to other species and the planet. Donna Haraway makes a call to consider as kin all life on earth. Earthlings, she says, “are kin in the deepest sense, and it is past time to practice better care of kinds-as-assemblages (not species one at a time).”⁵⁴ Her slogan for what she calls the Chthulucene epoch is to “Make Kin Not Babies!” While conversations around climate change often focus on *human* survival — only one species — there are millions of species who have become or are becoming extinct.⁵⁵ Reconsidering who we are talking about when we define communities can have both a direct ecological consequences for addressing population growth, but can also positively impact the shape of women's communities and lives.

Ways of living together, particularly in newer urban cities in the Americas and Global West, have not been organized to sustain

ecosystems or even the people living in them. Crudely stated, urban settings have been deployed by industrialists as a way to extract cheap labor.⁵⁶ More recently, such cities have been increasingly designed around automobility and the facilitation of flows of traffic moving labor power and merchandise. Western modernity's focus has not been on supporting local living and community relationships.⁵⁷ The work of energy transition now demands that we begin to *care* about how we live and whose interests daily-lived realities and "habits of mind" serve.⁵⁸ As moderns, we have organized our lives and our cities around what we value: oil is the lubricant for all of our social relations. In Canada, for example, the population resides in sprawling urban cities with even more spacious suburban developments, tied together by thousands of kilometers of train tracks, pipelines, highways, and fiber-optic telecommunication cables, dependent on oil. The value we in the developed West have attributed to oil generates corresponding social, economic, and political *power* dynamics and infrastructures that create immense wealth for some and inordinate precarity for others. We measure what we value: oil is measured on a daily basis by the global markets. Even carbon emissions are now valued within capitalist logics. What we do not measure (value) falls under the umbrella of externalities, or even casualties: glaciers, clean water, clean air, environmental rights, Indigenous rights, Indigenous peoples, women, or the Missing and Murdered Indigenous Women (MMIW) in Canada. As transitions to new energy systems occur, this valorization needs to change. Switching energy sources alone will not reconfigure our problematic relationships with one another, or our natural and built environments. To think otherwise is to fetishize oil, as though oil has produced these inequities. In actuality, oil is merely the fuel for the system.

Beyond the Impasse: Disrupting Left-Right Discourses with Feminist and Indigenous Worldviews

The World we Made is a multi-genre text and image narrative that captures and re-entrenches many of the ways of thinking and being

that allow for the reproduction of extreme disparity, across time and geographies. It registers the mentality that has produced what is now being referred to as the Anthropocene — or human induced climate change. Many mainstream attempts to mitigate climate change are grounded in what Ladelle McWhorter explores as “guilt as management technology,” which builds on Heidegger’s notion of *Bestand*. This worldview produces managerial and technological thinkers who see the world and its natural resources as ready for the taking — there for human use.⁶⁵ McWhorter claims that the Western sense of guilt is merely a reassertion of our technological dream of perfect managerial control when what is required of us is to “begin to live with the earth instead of trying to maintain total control. Guilt is part and parcel of a managerial approach to the world.”⁶⁶ This vision is consistent throughout Porritt’s book with chapter titles such as “Putting Nature to Work,” “Containing the Biotech Genie,” “Fixing the Climate,” “Malaria Tamed,” “Redesigning the Building Blocks of Life.”⁶⁷ What is not required in this vision of the future is any radical revision or transformation of the relationship we maintain with different environments. We remain distant from the earth: only able to interact with it in new managerial ways. This becomes explicit in an image near the end of the book: “Whether we like it or not, we’ve fundamentally transformed the way the world works, and our destiny now lies primarily in our own hands. Nothing else will sort it out. So the Holocene is dead — long live the Anthropocene!”⁶⁸ Of course, Porritt’s deliberately buoyant misinterpretation of the geological term “Anthropocene” risks redistributing responsibility for human induced climate change across the entire global population when, of course, it has largely been inflicted by those from the most privileged classes in the global West, with greatest access to *power* whether in the form of energy/fossil fuels or capital (labor power, access to resources, and so on), whose individual lives and capitalist exploits are the most energy intensive and environmentally damaging.

Linked to this move to flatten and redistribute responsibility for human induced climate change is another rhetorical sleight of hand

that fetishizes alternative energies and issues of ecology, uncritically associating environmental concerns with progressive leftist politics. Our particular historical moment is rife with the possibility for dramatic social transformation linked to the means of production (carbon-intensive energy/oil/coal), but if we are not vigilant about the ways “environmental” concerns are fetishized as inherently innovative, egalitarian, or leftist, the discourses of the right will succeed in perpetuating the existing social injustices of the age of oil, into the After-Oil period — thereby sustaining capitalism and all its inherent inequalities, this time fueled by wind and solar power. As others have argued before me, it isn’t oil that created these injustices. Just as I argue that it isn’t alternative energies alone that can undo these injustices.⁶⁹ Because energy systems (whether oil or alternative energy) merely fuel the capitalist networks of relations that ensure some lives are worth more than other lives.

Given Porritt’s status as an environmentalist and longtime politician with an economic focus, his book exposes both the expansive project of sustainable capitalism and its limits. His vision is shared by many. Porritt, who has dedicated over forty years to the environmental movement, has imagined for us a world virtually without Indigenous communities and without women. At best, it is a world that contains these categories at the margins, much as patriarchal capitalism always has. This, to my mind, highlights the urgency for interdisciplinary and intersectional forms of engagement between arts, humanities, and social science researchers with current political and business leaders so that we might all develop a more complex understanding of the current petroculture.

Thus, our project must be to decolonize existing hegemonies of thought and action that exploit peoples and lands. As Mél Hogan argues, “The objects of technology are always more valued, even when disposed of, than the bodies marked and mangled by an economy that reinstates and reinforces rapid cycles of technological development for the few by the many.”⁷⁰ Most obvious, of course, are those bodies caught up in international conflict and wars, on one side or the other,

all in the name of resource control. Then there are the increasing numbers of environmental refugees: “Since 2009, an estimated one person every second has been displaced by a disaster, with an average of 22.5 million people displaced by climate or weather-related events since 2008.”⁷¹ Of course, there are also the bodies left cleaning up and covering up oil spills who suffer toxic exposure to Corexit, or farmers and their families whose bodies absorb the fertilizers and pesticides required by genetically modified Monsanto seed. Moreover, these toxins filter down the food chain and water supply. The list of ecogenocidal practices goes on. Whether flora, fauna, land, or water, these casualties of profit are the “wasted lives” we have accepted as collateral damage of modernity’s quest for progress.⁷² Energy transition politics can continue to intensify inequities grounded in particular epistemologies, or introduce new alternatives. In other words, energy transition is an issue of social, political, and economic impasse — of radical indeterminacy filled with potential.

So where to go from here? We must be vigilant not only to the limits of capitalist theories and economic models to achieve an adequate energy transition, but to the lacunae of traditional Marxism and its tendency to undertheorize issues of race and culture, gender and sexuality, and the concerns of other equity-seeking groups.⁷³ This essay’s critique is situated within the context of interventions that Marxist feminists have been making for decades. Far better that we use the impasse — not to optimistically leapfrog this critical moment in pursuit of easy futures that are ultimately harshly cruel, but instead — to interrogate and disrupt ongoing conversation with feminist knowledges of all kinds, including Indigenous feminisms, womanism, decolonial love, ecofeminisms, Marxist feminisms, feminist system’s change, standpoint feminism, Xeno feminism, matrixial and maternal ecologies, feminisms yet to come that can inform new material realities as we imagine them into existence. To my mind this is a radically necessary response if any of the solutions imagined by local communities or global decision makers are to undo the injustices of our extractivist exploitative past and present in order

to ensure the equitable distribution of energy and *power* (in all its forms) in a future after oil.

Notes

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1. Lauren Berlant, *Cruel Optimism* (Durham: Duke UP, 2011) 4.
2. COP21 stands for the United Nations Framework Convention on Climate Change's twenty-first annual Conference of the Parties, which took place in December 2015.
3. Nick Stockton, "The Paris Climate Agreement," *Wired* (December 22, 2015) <http://www.wired.com/2015/12/the-paris-climate-agreement/>
4. Petrocultures Research Group, *After Oil* (Edmonton: Petrocultures Research Group, 2016) 16.
5. Berlant, *Cruel Optimism* 4.
6. Porritt himself is a well-known and respected environmentalist and long-standing member of Britain's Green Party. He has served as environmental advisor to Prince Charles, and *The World We Made* is endorsed by Bill McKibben, Richard Branson, Jeffrey Hollender, and others of similarly green pedigree. The book also describes the social projects of the Bill and Melinda Gates foundation, speaking of them with high regard.

7. Ruth Irwin, "Ecological Ethics in the Context of Climate Change: Feminist and Indigenous Critique of Modernity," *International Social Science Journal* 64.211-212 (2013): 111-123.
8. Irwin, "Ecological Ethics" 111123.
9. *Cruel Optimism* 196.
10. Slavoj Žižek, "The Spectre of Ideology," *Mapping Ideology*, ed. Slavoj Žižek (New York: Verso, 1994) 1.
11. Margaret Atwood, "It's Not Climate Change, It's Everything Change," *Medium* (July 27, 2015) <https://medium.com/matter/it-s-not-climate-change-it-s-everything-change-8fd9aa671804>
12. Stephanie LeMenager, "Introduction," *Living Oil: Petroleum in the American Century* (New York: Oxford UP, 2014) 17.
13. Jonathon Porritt, *The World We Made: Alex McKay's Story from 2050* (London: Phaidon Press, 2013).
14. Jonathon Porritt, "A Friend of the Earth: Longtime Environmentalist on Sustainable Future," Interview, "CBS This Morning," CBS (October 10, 2013) <http://www.cbsnews.com/videos/sustainable-future-for-earth-has-to-be-personal-environmentalist-says/>
15. Thank you to Sourayan Mookerjee, who suggested the idea of the scrapbook to me after I first presented on Porritt's book at MLG 2014 in Banff, Alberta.
16. The character Alex McKay has been a history teacher for the last twenty-eight years, nineteen of them at Ashton Vale Community College (4). His family has lived in the same house "just a few hundred meters from the college" for the nineteen years he's taught at Ashton Vale. He's now moving to start a new job in another part of the country (4). His stable life exists in stark contrast to the displacement of global populations addressed only in passing throughout the book but clearly a result of ongoing colonial projects around the globe.
17. Fredric Jameson, "Progress Versus Utopia, Or, Can We Imagine the Future?" *Science Fiction Studies* 9 (1982) 153.
18. Matthew Huber, *Lifeflood: Oil, Freedom, and the Forces of Capital* (Minneapolis: U of Minnesota P, 2013) 1-6.
19. David Harvey, "Population, Resources and the Ideology of Science,"

- Economic Geography* 50.3 (1974) 265.
20. The narrator of the story explains that “before we went to Tibet for real, we ‘visited’ dozens of places (including the Potala Palace) with some of our best friends, and on one occasion with the Dalai Lama himself a our guide! Brilliant stuff — and it just made the real experience all the more astonishing” (238). The virtual experience allows access not only to distant geographical locations but somewhat inaccessible cultural sites and persons, such as the palace and the Dalai Lama.
 21. Porritt, *The World We Made* 12
 22. In the section on virtual holidays, it is explained that a friend hiked the whole Santiago de Compostela from walking machines in their living room (238), illustrating a dissociation from actual nature.
 23. Mél Hogan, “Data Flows and Water Woes: The Utah Data Centre,” *Big Data and Society* 2.2 (Jul. 2015) 1.
 24. Hogan, “Data Flows and Water Woes” 1.
 25. For insights into the environmental impacts of clean energy, which make it clear that the consumption of alternative energies too is finite, see Ozzie Zehner, *The Dirty Secrets of Clean Energy and the Future of Environmentalism* (London: U of Nevada P, 2012).
 26. *Cruel Optimism* 24.
 27. *The World We Made* 82.
 28. *The World We Made* 205.
 29. *The World We Made* 82.
 30. *The World We Made* 13.
 31. *The World We Made* 209.
 32. Karl Marx, “The Chapter on Money,” *Grundrisse: Foundation of the Critique of Political Economy*, trans. Martin Nicolaus (London: Penguin and New Left Review, 1973). <https://www.marxists.org/archive/marx/works/1857/grundrisse/cho3.htm#p153>
 33. *The World We Made* 34.
 34. *The World We Made* 56.
 35. The term *natural* is of course being used consciously here to indicate the problematic worldview of capitalism as self-regulating in ways that erase its history as a system created by human beings.

36. The text is never explicit about where exactly in the Global West the story takes place. It could be anywhere in the “developed” English-speaking world: the U.K., Canada, the U.S., and so on. Wherever it is, there is a sense of calm pastoralism about it, with urban gardens and few people. It is the very invocation of what William Cronon has identified as the sacredness equated with wilderness, resulting from the fact that modern environmentalism is the offspring of Romanticism, and as such, it is very often equated with “some of the deepest core values of the culture that created and idealized it.” See William Cronon, “The Trouble with Wilderness; or, Getting Back to the Wrong Nature,” *Uncommon Ground: Rethinking the Human Place in Nature*, ed. William Cronon (New York: W. W. Norton & Co., 1995) 69–90.
37. In a 2011 CBC report titled “Privatization of Canada’s Electrical Grid Accelerating,” Pete Evans concludes: “Bottom line. Ultimately, Canada’s power system needs upgrading. And with governments tightening their belts for the new age of austerity in the wake of the stimulus money spent to pull the economy out of recession, it’s unlikely the country will turn back from privatization, experts say. ‘Canada is in a bit of a mess in trying to update its existing grid, which was based on this public utility model,’ Thomas says. ‘You can’t go back to the old publicly owned utility model at this point.’ Peter Evans, “Privatization of Canada’s electrical grid accelerating,” *CBC News* (March 30, 2011) <http://www.cbc.ca/news/business/privatization-of-canada-s-electrical-grid-accelerating-1.1016930>
38. *The World We Made* 5.
39. In “Ecological Ethics in the Context of Climate Change: Feminist and Indigenous critique of modernity,” Ruth Irwin explains that “the concept ‘world-view’ itself privileges a solipsist orientation and we need to re-imagine ourselves as part of the world-scape” (111).
40. Some ideas in this paper have also been explored in the introduction to *Petrocultures: Oil, Politics, Cultures*, eds. Sheena Wilson, Imre Szeman, and Adam Carlson (Montreal and Kingston: McGill-Queen’s UP, 2017).
41. In the chapter “Slumdog Billionaires” readers learn that life is “still hard” but “overall, life in such areas [of the globe] has improved” (221).

42. *The World We Made* 164.
43. *The World We Made* 217.
44. *The World We Made* 219.
45. *Cruel Optimism* 4.
46. *The World We Made* 37.
47. Stacy Alaimo and Susan Hekman, "Introduction: Emerging Models of Materiality in Feminist Theory." *Material Feminisms* (Indianapolis: Indiana UP, 2008) 13. See also Nancy Tuana, "Viscous Porosity: Witnessing Katrina," *Material Feminisms*, 188–213.
48. My previous work discusses in detail the discourses of the pro-oil right in Canada, including Ezra Levant's *Ethical Oil: The Case for Canada's Oil Sands* (2010) and the associated media campaign that the book inspired. See Sheena Wilson, "Gendering Oil: Tracing Western Petro-Sexual Relations through Colonialist and Capitalist Petro-Discourses," *Oil Culture*, eds. Ross Barrett and Daniel Worden (Minneapolis: U of Minnesota P, 2014) 244–263.
49. *The World We Made* 112.
50. Maria Mies and Vandana Shiva, *Ecofeminism* (London: Zed Books, 1993) 293–294.
51. Mies and Shiva, *Ecofeminism* 14.
52. Robert R.M. Verchick, for example, points out that many of the "most visible and effective environmental justice organizations are led by and consist mainly of women.... Thus, while 'environmental justice' describes an environmental movement and a civil rights movement, it also describes a women's movement... a feminist movement." Robert R. M. Verchick, "Feminist Theory and Environmental Justice," *New Perspectives on Environmental Justice: Gender, Sexuality, and Activism*, ed. Rachel Stein (New Brunswick: Rutgers UP, 2004) 63.
53. Silvia Federici, *Caliban and the Witch: Women, the Body and Primitive Accumulation* (Chico: AK Press, 2004).
54. Donna Haraway, "Anthropocene, Capitalocene, Plantationocene, Chthulucene: Making Kin," *Environmental Humanities* 6 (2015) 162.
55. For a compelling engagement with the scope and realities of species extinction, see Heather Ackroyd's and Dan Harvey's exhibit "Seeing

Red... Overdrawn,” an installation that asked onlookers to trace over in red and black the common and scientific names of thousands of species at high risk of extinction on a massive poster. <http://www.conflictedseeds.com/seeing-red-overdrawn/>

56. Andreas Malm’s case study of the transition from water to steam power illustrates that, depending on the industry, and despite coal’s eventual dominance, steam power was not always more “efficient.” Instead, coal’s eventual primacy was more closely related to its mobility and ability to exploit urban labor. See Malm’s *Fossil Capital: The Rise of Steam Power and the Roots of Global Warming* (New York: Verso, 2016).
57. See in particular Malm’s “Scarcity, Progress, the Nature of the Human Species? Theories of the Rise of Steam,” *Fossil Capital* 20–36.
58. Keller Easterling, *Extrastatecraft: The Power of Infrastructure Space* (New York: Verso, 2014).
59. “Household by household, we pick and choose what works for us personally in terms of available systems.... [A]nything to do with energy efficiency, water recycling, or waste has become so routine that we don’t have to bother about any of that from one year to the next — whilst still saving us money” (*The World We Made* 12).
60. See especially chapters 3 and 4 of Ruth Schwartz Cowan, *More Work for Mother: The Ironies of Household Technology from the Open Hearth to the Microwave* (New York: BasicBooks, 1983) for a detailed analysis of the ways in which technological development has affected (or not affected) gendered divisions of labor.
61. Huber, *Lifeblood* 21, emphasis in original.
62. Of course Airbnb is a very wealthy corporate enterprise and the reliance on this type of model by the average person to supplement personal income by renting a spare bedroom or inviting strangers to dine with you is evidence of an increasingly precarious labor market that demands we all become increasingly entrepreneurial. Airbnb and similar interface companies (that operate without owning or producing their own content or inventory) represent a shift in business models but by no means signal an end to rampant capitalism. In March 2015, *Tech Crunch* published an article that went viral for pointing out the obvious:

“Uber, the world’s largest taxi company, owns no vehicles. Facebook, the world’s most popular media owner, creates no content. Alibaba, the most valuable retailer, has no inventory. And Airbnb, the world’s largest accommodation provider, owns no real estate. Something interesting is happening.” And what is happening is that the real estate market has moved into the virtual sphere, where interface designers now attempt to attract and monetize our attention. Capitalism is certainly not threatened, but redefining the limits of capital and flourishing. See Tom Goodwin, “The Battle is for the Customer Interface,” *Tech Crunch* (March 3, 2015) <http://techcrunch.com/2015/03/03/in-the-age-of-disintermediation-the-battle-is-all-for-the-customer-interface/>

63. *The World We Made* 13.
64. *The World We Made* 82. “Volunteer” is a suspect term in a system where every aspect of human engagement is commodified using language that has historically defined social relationships. Is this a linguistic twist or is the next step for academics? In 2015, it is easy enough to observe the institutional move away from providing tenured secure employment that assures academic freedom and a good salary; as more colleagues retire, the neoliberal university of the twenty-first century is replacing their teaching by hiring PhDs on course-by-course contracts, creating the most highly educated category of contractual laborers in the history of the world; even this level of employment is being threatened by initiatives that transform university professors into hourly paid, poorly waged, precarious workers with tenuous academic freedoms, if any at all. As Porritt sees it, the next step is that we all become volunteers over the internet. Realistically, we are more likely to be replaced by online courses and interactive textbooks that we are encouraged to design.
65. Ladelle McWhorter, “Guilt as Management Technology: A Call to Heideggerian Reflection,” *Heidegger and the Earth: Essays in Environmental Philosophy*, ed. Ladelle McWhorter et al. (Toronto: U of Toronto P, 2009) 9.
66. McWhorter, “Guilt as Management Technology” 14.
67. *The World We Made* 91, 101, 136, 179, 192.
68. *The World We Made* 267.

69. Haraway, "Anthropocene, Capitalocene, Plantationocene, Chthulucene."
70. Mél Hogan, "The Archive as Dumpster," *Pivot* 4.1 (2015) 31.
71. The UN Refugee Agency, "UNHCR, the Environment, and Climate Change," *unhcr.org* (October 2015) <http://www.unhcr.org/540854f49>
72. Zygmunt Bauman, *Wasted Lives: Modernity and its Outcasts* (Cambridge: Polity, 2004).
73. Glen Coulthard summarizes at least three of the weaknesses of Marxist theories of primitive accumulation in the conclusion of his book *Red Skin, White Masks : Rejecting the Colonial Politics of Recognition* (Minneapolis: U of Minnesota P, 2014): (1) its temporal rigidity (given the ongoing realities of colonialism); (2) its "normative developmentalist character" that deems primitive accumulation necessary for capitalist alternative to settler-colonialism; and (3) its inability to recognize the ways that primitive accumulation *naturalizes* the hierarchies that produce life (151–152). In short, he rejects any definition of settler-colonialism that acknowledges only its coercive, violent, repressive nature, while refusing to acknowledge its productive aspects.