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# ON PETROCULTURES

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GLOBALIZATION, CULTURE, AND ENERGY

*Imre Szeman*



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*for Pulpo, with love*



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## Introduction: On Petrocultures

I really started to notice it in fall 2017. Some of the places that I visited on a daily basis—a park to which I take my puppy for a scamper, a coffeehouse that I visit to do some writing—began to buzz with ideas I was not used to hearing in downtown Toronto. On a late-November day when the temperature reached +17 C (63 F), Jack-the-terrier’s owner remarked: “Did you notice that they’ve started calling it ‘climate change’ instead of ‘global warming’?” He suggested that maybe we should just enjoy warm winter temperatures instead of worrying about them. Jack’s owner, an engineer who works in the Arctic from time to time, began to tell me about what he had encountered on trips to the North. I thought it was going to be about melting ice and disappearing glaciers. He spoke instead about core samples and what their findings show. Maybe they *didn’t* indicate that the planet was warming after all. He held up his hands in protest, “Don’t get me wrong, I know that there’s climate change. I’m just saying . . .”.

This turned out to be just the first such shift of attitudes about climate that I encountered. The Black Cat on College Street attracts a mix of patrons, from graduate students struggling with their theses to the owners of stores located nearby who pop in for an espresso. One person who visits multiple times a day is an older, small-time lawyer who holes up in a corner with friends. They argue affably with one another about every topic under the sun. The corner table at The Black Cat is sometimes a site of discussion about the meaning of life, whether it’s possible to write about something you haven’t experienced (one of the crew writes fantasy novels), changes in the way that the sexes interact, or the fate of local sports teams. Their comments are rarely objectionable, even if the facts and figures they sometimes espouse are questionable—a Google Search view of the world. For the most part, these men are aware that people are

shaped by their environments, and their headshaking about the world tends to be about the injustices inflicted by the rich and powerful, or about incompetencies characterizing local politics.

As of late, however, my eavesdropping at The Black Cat has left my blood boiling. While these older, liberal men talk about a range of topics, these days they inevitably end up on the subject of the environment. What they talk about isn't how bad things are, or how little action there appears to be on global warming in Canada.<sup>1</sup> Rather, they feel misled about climate change. They're pretty sure that things are not as bad as experts say. They sense a conspiracy afoot. One of the men returns again and again to two points of evidence to back up these claims. The first concerns results from the oldest continuously operating temperature gauge in the world. He claims that this gauge shows that, contrary to everything that scientists have been telling us, the temperature of the planet is *decreasing*.<sup>2</sup> The second concerns claims made in Al Gore's documentary, *An Inconvenient Truth* (2006). A little over a decade later, the man in the corner insists excitedly that many of Gore's claims about climate change have been irrefutably proven to be "completely false!"

I've talked to Jack's owner, cautiously pointing out, for instance, that if there has been a shift from the language of global warming to climate change, then it's a trick and a con—a way of shaving off the rough edges of the need for significant and immediate action to address the warming of the planet and producing instead a situation that seems accessible to policy prescriptions and technological solutions, while also introducing a hint of doubt (in just what way is climate changing?). I've drawn attention to the repeated findings and pronouncements made by armies of scientists attesting to the reality of global warming—including recent reports about the Arctic.<sup>3</sup> Though he sees himself as a concerned Canadian and good citizen, Jack's owner remains unconvinced. He thinks that there is something fishy going on, though he's at least willing to concede that he might be wrong about just what that is.

As for The Black Cat patrons? I imagine interrupting their conversation. I want to correct their assumptions, challenge their evidence, and convince them that they need to take all manner of environmental crises more seriously. Luckily, I think, I've hesitated up until now. I have a sense the conversation would go awry rather quickly, drifting into *ad*

*hominem* attacks about the fact that I drive a car or take flights to conferences and events, or even about the choices I make about coffee—you name it (in my defense, Canada does not produce a lot of locally grown coffee). I want to tell them that scientists have, almost without exception, made it clear that we are facing a planetary emergency.<sup>4</sup> But they would take small and slight exceptions as clear challenges to the rule I was trying to argue. In an era of fake news, it has become easy to constitute challenges to expert opinion and authority;<sup>5</sup> in an age of conspiracy, the narrative of the scientific voice in the wilderness—the lone wolves who aren't convinced about global warming—is often going to be attractive to people who don't know, or don't want to know, what's going on.<sup>6</sup>

As the growth of climate skepticism shows, one of the greatest social and political challenges of the present moment is how to effectively communicate about global warming.<sup>7</sup> This is a challenge less of available data than of rhetoric and representation, as many critics have pointed out.<sup>8</sup> Texts in different genres have hoped to have the intended outcome of Gore's film: to alert readers or viewers about a problem so that they might effect a change in practice. These documents include everything from the chain of reports issued by the United Nations' Intergovernmental Panel on Climate Change to information one can find on the website of the Union of Concerned Scientists, and from Pope Francis's *Laudato Si'* (*Encyclical on Climate Change and Inequality*, 2015) to the actual text of the Paris Climate Agreement (2015), as well as a range of texts—in film and fiction—that have struggled with the representation of a world impacted by global warming.<sup>9</sup> The essays brought together in this book are animated by a hope and desire to create new ways of talking about the challenges of global warming—and about other long accepted verities as well, including nationalism, globalization (another favorite topic of the coffee shop corner table), and the operations of twenty-first-century capitalism, which have been propelled by new categories of acting and being such as creativity and entrepreneurship.

One of the topics at the heart of this book is how we relate—or fail to relate—to energy. When it comes to talking with the people I encounter on a daily basis in the communities in which I live, I'm tempted to challenge their views by playing the role of professor. Surely

confronting them with the evidence about climate change accumulated by technical and scientific expertise will get them to see things differently! But contemporary subjects live exceptionally complex lives that aren't necessarily governed by rational choices formulated around the careful consideration of scientific evidence. The inevitable pressures of work and life, combined with the fragmented manner in which all of us cobble together information on any almost any subject whatsoever, means that as often as not we are governed by those hegemonic, conservative truisms to which Roland Barthes draws our attention in *Mythologies*.<sup>10</sup> Pointing didactically to hyperobjects like the climate or global warming isn't likely to generate a change in my fellow citizens.<sup>11</sup> But I've found that engaging them with a story about energy, about our demand for it and the limits of its availability, and about the consequences of its use—at once geopolitical and environmental—shifts the frame of reference; it moves the analysis from the abstraction of the climate to the reality of the gas tank. It enables us to have a discussion, too, about one of the things too often hidden in regular discussions of global warming: the past, present, and future of oil capitalism and the petrocultures it has generated.

\* \* \*

*On Petrocultures* brings together twelve essays I have written over the past two decades. They cover a diverse range of topics—from a defense of the concept of “national allegory” in relation to postcolonial fiction to the state and fate of cultural theory in the context of globalization, and from neoliberal refigurations of autonomy and culture (via the celebration of entrepreneurship and creative economies) to essays that played a role in shaping the field of “energy humanities.”

It would be a stretch to say that these essays are all part of a single, coherent project—that is, that my argument about the importance of national allegory leads directly to the elaboration of “pipeline theory” (in one of the previously unpublished essays in this collection). Even so, as distinct as their topics might be, they *are* animated by a shared set of concerns. These essays are about life lived in late capitalism, the operations and circulations of key concepts we use to comprehend and narrate our collective histories, and the ways in which our intellectual



and political commitments to these concepts aid or impede social and political justice. What did the concept of the nation do to the radical political energies of postcolonial cultures and societies? How did the narrative of post-Soviet globalization cover up, cover over, and legitimate intensified practices of neoliberalism and resource extraction? What are the cultural and social implications of discourses of creativity (as foregrounded in Richard Florida's concept of "creative cities") and entrepreneurship, especially with respect to critiques of capitalism and arguments for the creation of new collectivities? In each case, what I have been concerned with is an understanding of the broad political implications of the vocabulary through which contemporary capitalism makes sense of itself, and through which we have been invited to make sense of it, too.

As throughout my work (beginning with *Zones of Instability*), there is here a fascination with the delimitation of space by nations, cultures, and borders.<sup>12</sup> The nation has to be counted as one of the most extraordinarily powerful fictions of the modern era—a way of connecting sovereignty to geography that has come to be taken as the accepted, principal mode of political power. Its mechanisms of geo-sovereignty have, since at least Johann Gottfried von Herder, also acted as containers for the practices, activities, and beliefs known as "culture," which in turn have helped to legitimate national sovereignty by noting and naming the distinctions between the people living in different nations.<sup>13</sup> At least from one perspective, the advent of post-Soviet globalization promised to bring about an end to national-cultural struggles, via the birth of a cosmopolitan world positioned as the next step in a never-ending process of Kantian maturation. Now we all belonged to one world, one global culture, even if we still lived within our separate nations. From the beginning, however, globalization was as much of a fiction as nationalism, flattening the world out only for trade, commerce, and the movement of money, and dividing the world into (in Zygmunt Bauman's memorable taxonomy) "tourists" and "vagabonds," those who could travel freely across borders and those who couldn't (or could only do so illegally).<sup>14</sup> Globalization was imagined as the end of nations or national-cultures only for elites who stood to benefit from this redefinition of borders. The practices and policies of neoliberalism that gave life to

globalization have created new discourses of subjectivity—of being and belonging, acting and reacting, in which personal autonomy and cultural identity are linked in increasingly complicated ways with the yawning gap in the social left by the retreat of the state into the market. One core group of essays in this book maps the complex, often violent games of power, culture, and borders that continue to be played out across the globe, to the benefit of some and the detriment of the vast majority of the planet's inhabitants.

Another group of essays collected here examines the epistemology and social ontology of energy. When I began actively thinking about fossil fuels, what struck me with enormous force was the absence of a concerted exploration of the importance of energy for modernity. Fossil fuels were hiding in plain sight—an obvious force in wars, geopolitics, infrastructural developments, and almost everything associated with modern “progress” (from the expansion of technology to the growth of democracy). And yet fossil fuels and energy were a missing element of critical scholarship. They were missing, too, from the literature and culture of modernity, from those novels and films that we rely on to capture the unconscious forces and stresses shaping the social. When I would make these claims at conferences or in talks, or in my written work, most people would grasp immediately the enormous absence to which I was pointing. Some, however, would claim that I was overstating things, and would point to the importance of fuel in shaping novels (for instance), everything from Herman Melville's *Moby Dick* (whale oil, 1851) to Upton Sinclair's *Oil!* (the stuff of the book's title, 1926–27) to Karel Čapek's remarkable *The Absolute at Large* (free energy, 1922). This really is a case, however, where the few exceptions prove the larger rule: there has been a marked failure to theorize energy, its significance, and its consequences in any concerted manner.

It is hard not to narrate the geopolitical history of the United States in relation to fossil fuels. Access to oil is at the center of its rise to the role of superpower in the twentieth century, and the drive for ever more of the stuff is key to its ongoing manipulation of Middle Eastern politics. The current Trump administration is nothing if not a petrocultural government, whether measured by the number of former oil executives occupying senior positions in the administration, or by its

fetish for coal and fantasies of a mid-century white America that was made possible (in part) by enormous amounts of dirty energy. Amitav Ghosh once asked why there was so little attention in US fiction to the country's geopolitical misadventures in the Middle East.<sup>15</sup> The same question can be asked of other fictions and cultural forms, to probe why the substance at the heart of so many geopolitical misadventures has been missing everywhere and in our accounts of everything—a gap with enormous consequences with which we are only now beginning to grapple. We moderns are creatures of fossil fuels (if to different degrees in different places in the world), a fact we have largely chosen to forget in our accounts of our histories, politics, and culture.

The area of research now known as the “energy humanities” has, over the past decade or so, begun to fill in some of the missing pieces of the puzzle of energy in contemporary culture.<sup>16</sup> My own work has tried, in part, to make sense of whether there is something about fossil fuels that has made them difficult to represent, which might explain why an element of such importance to the shape and form of modernity has been missing from characterizations of the modern. I've approached this question in two distinct, if related, ways. The first has been to assess the socio-political and cultural reasons for the under-representation of energy in general, and fossil fuels more specifically, in literature, film, and other forms of cultural representation. This mode of analysis draws attention to the character of oil's presence or absence in the political imaginaries of modernity, and tries to offer reasons for why energy hides in plain sight. My second approach has been to ask deeper questions about the ontology of oil and energy, and to consider what this ontology implies for how we have characterized oil capitalism and constituted challenges to it. In both cases, I've wanted to understand if there is something about the nature of fossil fuels (oil *qua* oil) that makes them resistant to fully naming and explaining their essence and their essential role in shaping modernity. Do representations of fossil fuels—those narratives and images that do in fact exist—miss the mark when they fail to capture how and why this is a substance that *cannot* be represented? In their eagerness to deal with a missing element, do they show it off too quickly, too didactically, and so fail to actually address the reasons for its absence in the first place? How, then, might

one make sense of such a substance, and bring to light the political and environmental consequences of our having shaped every aspect of civilization around it?

The process of coming to grips with the unique character of fossil fuels, epistemologically as well as ontologically, has been a difficult one, with at times an unclear trajectory. While there is a large and rich body of research that explores fossil fuels and society, especially in the fields of anthropology, history, and (more recently) literary criticism, when I began my reflections I found only a few essays and books that spoke directly to my particular concerns. This small cluster of work is book-ended by Ghosh's insightful critical writing—beginning with “Petrofiction: The Oil Encounter and the Novel” (1992) and ending with *The Great Derangement: Climate Change and the Unthinkable* (2016)—which asks big-picture questions about the incapacities of fiction to name ourselves in relation to our petrocultures, and challenges us to develop modes of representation that might yet help us more fully grapple with the substance animating modernity.<sup>17</sup>

A handful of other texts have been critically important as well. I still know of no book that better articulates the implications of the power unleashed by fossil fuels for human ontologies, epistemologies, and ethics than Allan Stoekl's *Bataille's Peak: Energy, Religion, and Postsustainability* (2007); in my opinion, this is a work that has yet to receive the full critical response it deserves, an engagement that would generate new explorations of the deep connection between subjectivity, community, and energy (I plan to devote critical time and energy to this book in the near future). Dipesh Chakrabarty's “The Climate of History: Four Theses” (2009) and Timothy Mitchell's *Carbon Democracy: Political Power in the Age of Oil* (2011) offer profound re-narrations of modernity by highlighting the element all too often missing from our histories: energy. As these thinkers have done with history in relation to energy, Jeff Diamanti has provocatively done with (among other things) the built environment of modernity, which he describes as having been shaped by a process of “energy deepening,” an ever-expanding, recursive commitment to fossil fuels that might well have made it extraordinarily difficult to generate alternatives to petroculture. Stephanie LeMenager and Jennifer Wenzel have each helped me to see how foregrounding

fossil fuels can generate profound new ways of understanding cultural narratives. LeMengaer's essay, "Petro-Melancholia: The BP Blowout and the Arts of Grief," alerts us to the affective dimensions of our relation to fossil fuels, including the genres, practices, and mechanisms we use to critique this relation; our critical texts, too, are marked by their emergence in a period in which energy was imagined as infinitely available, which means that critique is also filled with and defined by the energies of petromodernity. Finally, in addition to her many other contributions to the field, Wenzel's introduction to *Fueling Culture* remains the single best overview of the questions and concerns animating energy humanities; anyone interested in this field would find this a great place to start.<sup>18</sup>

I describe my work on oil—both the essays included in this book and my broader work on energy—as an attempt to develop a *critical theory of energy*. As surely as all of the other systems and practices interrogated by a critical theory of society, the processes associated with and generated by our use of energy produce social possibilities and limits that need to be thoroughly explored. From its origins, the aim of critical theory was to imbue social analysis with an explicitly political intent. Critical theory would profess not only to understand the forces and processes that shaped social forms and practices, but to do so for emancipatory purposes. It's hard not to hear the echo of Marx's eleventh thesis from *Theses on Feuerbach* in Max Horkheimer's description of the activity of Frankfurt School critical theory: "Its goal is man's emancipation from slavery."<sup>19</sup> In addition to its explicit political goal, the theory and analysis undertaken in critical theory would also be alert to the limits of theory as such, by being permanently attentive and attuned to the positivisms and utilitarianisms to which social analyses are vulnerable. Critical theory determinately jettisons the political fiction that social science might be able to mirror the disinterest and objectivity of the natural sciences. When we speak today of critical theory in a more generic sense—that is, as not just the direct outgrowth of the work of the Frankfurt School, but as a practice that more commonly goes by the name "theory"—it is this that I think we have in mind: an alertness and awareness of the damage that concepts can do when heuristics are mistaken for (whether accidentally or deliberately) facts of nature.

Given this, exactly what might it mean to develop a critical theory of energy? Energy should not be taken as just a *topic* of study for the human sciences—another field to add (say) to the environmental humanities, or a needed reminder of the resource politics that constitutes an essential component of colonialism and postcolonialism. The new attention to energy that has been promulgated by the energy humanities is intended to unnerve the continuing legibility of the study of history, politics, philosophy, and literary and cultural studies, as presently practiced. The critical work involved in the energy humanities goes well beyond the “ta da!” of revealing a missing component of the various core elements of the narrative of the modern—of democracy, belonging, and community, of colonialism and postcolonialism, and indeed, even of the constitution of subjectivity. If this was all that looking at energy accomplished, there would be little left to do once the initial reveal took place. In truth, what the emergence of energy in the field of the human sciences demands is not just a slight amelioration of critical vocabularies, a nip-and-tuck addition of energy to the discourses we already have, but a wholesale refashioning of these vocabularies and their presumed objects of study.

The modern subject, for example, has had her capacities radically redefined by cheap energy. The petrocultural subject’s life is configured around the energies of millions of years of dead matter; what she understands as banal quotidian reality is in fact a bending and stretching of time to give the subject powers of movement, vision, and knowledge akin to that of the demigods found in ancient myth. To the powers of the unconscious mapped by Freud and the powers of political economy interrogated by Marx, we need to add the capacities of energy, which inhabit (and shape and form) both these spaces and still others we’ve yet to fully probe. In short, a critical theory of energy insists that *adding energy to the mix of our analyses on any subject whatsoever forces a refashioning of the theories of the forces that animate the social and the subjects within it.*<sup>20</sup>

The fundamental challenge that energy poses to theory is one that scholars are slowly beginning to recognize. What is perhaps less evident are the political and emancipatory forces that emerge from critical attention to energy. Remember Horkheimer’s words: the goal of critical theory is emancipation from slavery. One way in which some writers



on energy have tried to insist on its social import and significance is by linking it *directly* to the practice of slavery. As a way of changing attitudes toward our current levels of energy use, “emotionally as well as intellectually,” Jean-François Mouhot points out, “if we all wanted to benefit from our current lifestyles without any fossil fuels, we would need to employ several dozen people working full time for us.”<sup>21</sup> The energy of fossil fuels allows us to do things we could not otherwise do; only by drawing on the energies of other bodies in servitude to us could we approximate the now taken for granted powers of the modern subject. The link made to slavery suggests that the critical aim of the energy humanities is to get us to abandon fossil fuels in favor of other, greener forms of energy, and so interrupt the operations of modernity as a formation in which we live way beyond the limits of our physical bodies and collective means. Mouhot has still other reasons for drawing the connection between energy and slaves. He worries that there is a real risk of a return to slavery in the future if dependence on fossil fuels is not addressed in the present, as elites try to maintain fossil-fuel comforts and lifestyles even in a post-fossil fuel world. However powerful such analyses of our fossil-fuel servitude might be, using oil is *not* the same as using slaves; the appeal by Mouhot and others to the notion of “energy slaves” is, at best, an attempt to gesture toward an ethics via a somewhat offensive allegory. One of the side effects of this view of fossil fuels is that it has inadvertently helped shape a strongly held belief that a shift to wind and solar power occasions a more general expansion of social justice—a completely unsubstantiated view of how energy and social possibility are linked. The real political and emancipatory force of the energy humanities lies elsewhere.

Our use of fossil fuels is the single biggest source of human-produced CO<sub>2</sub>. In other words, it is in large part our commitment to our petrocultures, both conscious and unconscious, that has re-shaped the global environment, and in a very short period of time. Fossil-fuel use and CO<sub>2</sub> production has expanded precipitously since World War II, a period referred to by some critics as the Great Acceleration.<sup>22</sup> During this period, expanded uses of fossil fuels enabled increases in population (through, for example, industrial agriculture and the widespread use of fertilizers), which in turn increased the demand for fossil fuels, and

so on, generating a human footprint of astonishing proportions on the planet.<sup>23</sup> In order to address the impact of fossil fuels on the environment, it is clear that we will need to undergo an energy transition this century—a shift from dirty energy to clean, renewable, and sustainable forms of energy. The consensus among scientists of the need for energy transition is matched today by the majority of the world’s policy makers: documents like the Paris Agreement are not only about limiting CO<sub>2</sub> output, but also about enabling energy transition. To date, very few countries have actually engaged in the processes needed to undergo energy transition; the most well known and most successful of these is Germany’s impressive *Energiewende* (energy transition), which in short order has managed to make renewables the dominant energy source in the country.<sup>24</sup>

Almost without exception, discussions of energy transition make a presumption that needs to be challenged. Fossil fuels have played an essential role in activating and enabling the operations of capitalism, and all that comes with it: profit over people, ferocious extractivist practices, and social and political injustice. For the most part, both existing and planned practices of energy transition presume the persistence of contemporary capitalism and the forms of neoliberal governance that have accompanied it.<sup>25</sup> Current models of energy transition *do not* imagine that, in order for it to be successful, there must also be transitions in culture, society, and politics, too. This should come as little surprise. It is not only the self-interest of the status quo that is at work in imagining that a capitalism developed in conjunction with the easy-to-access (until recently) and cheap energy of fossil fuels could continue long into the future, with nary a hiccup or misstep, but now energized by solar panels and wind farms (with an added benefit of a desperately sought after injection of value through the introduction of new forms of energy).<sup>26</sup> The gaps and absences that the energy humanities have noted in conceptions of our social and cultural past remain alive, as well, in most articulations of our political futures. From the perspective of the status quo, energy doesn’t seem to be anything other than the input we need to make things run. So why couldn’t there thus be a renewable energy capitalism, one that would continue to make profit without harming the planet?<sup>27</sup>



I believe the period of energy transition offers a political opening—an unexpected one. The energy of fossil fuels has given rise to a specific way of life. Oil has shaped our communities in ways that have produced an abiding loyalty to the substance; it has generated a violent geopolitics organized around access to and control over the “black gold” that fuels the planet. This way of life is one that is neither especially well-loved nor actively defended by the planet’s human inhabitants. The majority of us have no real commitment to the inequalities and injustices that oil capitalism and its political mechanisms have promulgated, and certainly don’t wish to destroy the environment. As fossil-fuel capitalism begins to shift to other forms of energy—reluctantly and haphazardly, as evidenced by the last stand of fossil-fuel capitalism in the Trump administration—it seems to me that the possibility of other transitions opens up. One of the key political struggles of this century will be whether an energy transition can be achieved without other forms of transition, or whether the profound dislocation of moving away from fossil fuels, in the context of a growing awareness of global warming, will generate social and cultural transitions, and political ones, too. Dipesh Chakrabarty writes: “The mansion of modern freedoms stands on an ever-expanding base of fossil-fuel use. Most of our freedoms so far have been energy-intensive.”<sup>28</sup> The emancipatory struggle announced by a critical theory of energy is to develop a world not only beyond the dictates of oil capitalism, but also one whose freedoms aren’t the outcome of the use of massive amounts of energy. The carbon democracy whose development Timothy Mitchell outlines is a democracy in name only; and many of our freedoms to date have been little more than a fantastical deification of the human, giving some of us powers and capacities, but operating on the borrowed time of fossilized bodies, at the expense of the world we inhabit.

\* \* \*

This call to arms for new freedoms and new modes of democracy is hardly new; indeed, it defines the genre of left politics in a moment of political impasse and interregnum. What I hope *is* new is that a concern with energy links the possibility and nature of freedom and democracy directly and deeply to the physical and the material. It places

the language of rights in conjunction with the vocabulary of kilojoules and British thermal units.<sup>29</sup> This link of freedom with physical power raises an issue that has rarely been analyzed, but which constitutes yet another dimension of critical theory of energy: energy justice.<sup>30</sup>

The issues and challenges associated with energy justice arise in, of all places, Raymond Williams's "Culture Is Ordinary" (1958). This essay is most frequently cited as a powerful rejoinder to attempts to denigrate the culture of ordinary people. Williams's critique is directed as much to the anxieties about mass culture expressed by Max Horkheimer and Theodor Adorno in *Dialectic of Enlightenment* (1944) as it is to the affirmation of the Arnoldian view that ordinary popular literature tends to "teach down to the level of inferior masses."<sup>31</sup> To claim that culture is ordinary is to say that culture is a space of life and experience, a resource for groups and individuals, which is diminished neither by the existence of mass, commercial culture, nor by the use of culture to legitimate social divisions via games of distinction and the exercise of class power (as it is in the use of culture in relation to the creative culture of entrepreneurial society). "I believe the central problem of our society, in the coming half-century," Williams writes, "is the use of our new resources to make a good common culture; the means to a good, abundant economy we already understand."<sup>32</sup>

More than half-a-century later, it comes as a surprise to hear Williams suggest that we already understand the means to "a good, abundant economy." The continued expansion of global per capita GDP since 1958 certainly speaks to an "abundant" economy, even if this plenty has largely been retained by elites at the tiptop of the economic ladder. The good economy here is imagined in relation to the Keynesian compromises of the postwar era, which create a situation starkly different from the horrors outlined just two decades earlier in George Orwell's *The Road to Wigan Pier* (1937). It is also connected to the capacities introduced into daily life by industry and technology:

At home we were glad of the Industrial Revolution, and of its consequent social and political changes. True, we lived in a very beautiful farming valley, and the valleys beyond the limestone we could all see were ugly. But there was one gift that was overriding, one gift

that at any price we would take, the gift of power that is everything to men who have worked with their hands. It was slow in coming to us, in all its effects, but steam power, the petrol engine, electricity, these and their host of products in commodities and services, we took as quickly as we could get them, and were glad. I have seen all these things being used, and I have seen the things they replaced. I will not listen with patience to any acid listing of them—you know the sneer you can get into plumbing, baby Austins, aspirin, contraceptives, canned food. But I say to these Pharisees: dirty water, an earth bucket, a four-mile walk each way to work, headaches, broken women, hunger and monotony of diet. The working people, in town and country alike, will not listen (and I support them) to any account of our society which supposes that these things are not progress: not just mechanical, external progress either, but a real service of life. Moreover, in the new conditions, there was more real freedom to dispose of our lives, more real personal grasp where it mattered, more real say. Any account of our culture which explicitly or implicitly denies the value of an industrial society is really irrelevant: not in a million years would you make us give up this power.<sup>33</sup>

In “Culture Is Ordinary,” the good economy is made possible by the expansion of industrial society—by its mechanisms and technologies, which enrich ordinary life by opening up freedoms and opportunities never before available to working people. The prospects that one finds in ordinary culture as a result of industrial society is linked, too, to “the gift of power”—“steam power, the petrol engine, electricity, these and their host of products in commodities and services.” The introduction of power led to the introduction of modern freedoms: “more real personal grasp where it mattered, more real say.”<sup>34</sup> Williams will not gainsay these freedoms; he and his family, and all those others who occupy ordinary culture, will not give up this power for anything.

There are vast differences in energy use across the world, and within different groups and communities within every nation. Many parts of the world are still awaiting the capacities and opportunities that Williams’s home experienced in 1958. The International Energy Association

estimated total world energy consumption in 2013 was 12.3 terawatts (a terawatt is one trillion watts). This energy is used unequally, ranging from 13,000 to 25,000 W per capita in places like Kuwait and Qatar to 286 W in Bangladesh and 390 W in the Congo—a *one-hundred-fold* difference in energy use between Qatar and Bangladesh, and even more if compared to Afghanistan or Eritrea.<sup>35</sup> These differences between countries speak to differences of climatic zone, the size of countries, and more. But they also speak to vast differences of social and physical capacity and ability granted to people around the world as a result of the energy to which they have had access. Put bluntly: in many parts of the world women still have to wash clothes by hand in (often) dirty rivers, and children have to walk miles to and from school. This is, at a minimum, time and physical and mental energy that could be put to different use.

In the world today, not everyone has the basic levels of energy that Williams insists on as necessary for freedom. Those who have yet to realize this level of energy are not ready to simply give up on the capacities and possibilities that increasing levels of fossil-fuel use opens up simply because those in the Global North have suddenly become anxious about the deformation of atmospheric gases that their societies have generated over two centuries of economic value extraction from the environment. This presents an enormous political challenge, one that I believe will come to define the politics of this century. The problem of not recognizing the role of cheap energy in freedom and democracy is that we've avoided taking on the material challenge of reimagining opportunities for more and more people around the globe, preferring the story of a progressivist narrative whereby things slowly get better with time, no matter what. The unspoken hope and expectation is that the developing world will leapfrog the fossil-fuel era straight into solar panels and wind farms, and thus avoid linking development with the burning of carbon. How exactly this is supposed to occur is never fully articulated or explained—it's just supposed to happen so that we might be saved from the trouble of attending to the deep environmental and economic injustices that access to dirty energy has fueled and continues to fuel.

How else might we approach these issues of justice and injustice in relation to energy and the freedoms that accompany its use? In *A Theory*

of *Justice* (1971), political philosopher John Rawls famously begins his elaboration of the principles of social justice by articulating a thought experiment—the “original position,” which is a hypothetical ground zero from which the principles of liberal societies were re-constituted. How might we develop social justice today were we to start from scratch, shrouded behind a veil of ignorance, unaware of what position we might occupy in society, or our ethnicity or gender, or anything at all? What principles of justice might we establish that would value each of us for who and what we are *qua* being human? Much of Rawls’s lasting influence on discussions of ethics and politics within the liberal tradition is owed to the conceptual power of this original position, which asks us to consider the levels of equity, fairness, and justice that should be extended to everyone.

What if we were to add energy to the issues that had to be addressed in this original position? Rawls never speaks of energy as an issue of social justice. And while he is not a strict egalitarian in his understanding of how goods, capacities, and abilities should be assigned in a society, he does identify the need for there to exist a social minimum available to each and every person such that they can achieve their version of the good life however they might want. In the assignment of how much energy each person should have available to them, it’s unlikely that those in the original position tasked with creating the principles of social justice would think it fair or reasonable that there be vast differences in the amount of energy available to each person: it would mean vast differences in the capacities and opportunities for individuals; it would also mean huge differences in environmental impact across communities, with those using very little energy having to live in an atmosphere poisoned by those using a great deal—in other words, a model of the world as it presently exists.

The average per capita energy use across the globe is 1640 W. Might this represent the beginning point of a discussion over what an energy commons might look like? Of what might constitute a just use of energy? If everyone on the planet used the same energy as a Canadian, total planetary consumption would be 74 terawatts per year—*six times* as much energy as we currently consume across the globe. The figure of 1640 W per capita is close to current energy use in places like Uruguay

and Iraq; and even this figure is too high given the need to limit energy even further due to increases of population and, of course, impact on the environment.

The political challenge posed by energy justice is enormous, involving not just the generation of new social narratives, but also the production of new infrastructures. What is required “is a radical change in the key economic choices which shape civilization over long periods . . . a decisive broadening of political and social democracy, a profound change in individual behavior and education.”<sup>36</sup> This is why energy transition necessitates a social, cultural, and political transition, too, a profound re-imagining of resource demands and their environmental consequences. What is needed for a real energy transition is something akin to a revolution, if for reasons and on terms very different from how revolution was understood over the previous two centuries. A critical theory of energy *is* about our collective emancipation from slavery; it is a politics of freedom, democracy, and equity that always already attends to the resources that expand and extend human capacity, and ensures that our use of these resources doesn’t impact the physical environments we collectively inhabit.

I hope that the insights these essays bring together about the difficult issues and questions we face, involving the goods of the Earth and the goods we expect to have in our lives, might contribute to the ongoing struggle to bring social and environmental justice together in rich and vibrant new ways. I hope, too, that they help set the terms on which it might be possible to talk of justice and revolution not only with my academic peers, but also with acquaintances in dog parks or cafes—with all those people whose ordinary cultures will need to be honored and energized in the many transitions just over the horizon.

—Toronto, February 2018

#### NOTES

1. Canada remains far off the climate target it set for itself under the terms of the 2015 Paris Agreement. Emissions in 2015 were 722 megatonnes of greenhouse gas emissions; the 2030 target is 523 megatonnes. See Marie-Danielle Smith, “Emissions down slightly, but Canada not yet on track to meet 2030 climate targets: report,” *National Post*, April 21, 2017, <http://nationalpost.com/news/politics/>



- emissions-down-slightly-but-canada-not-yet-on-track-to-meet-2030-climate-targets-report (accessed August 17, 2018).
2. Where did my coffee shop pal get this info? I expected to be able to find some slip of evidence online on various climate denial websites. In this case, to my surprise, I simply wasn't able to do so.
  3. A report released by the Arctic Council in November 2017, which summarized research from 2010 to 2016 and represented the work of 90 scientists, concludes "the top of the world is getting warmer faster than anyone thought . . . the Arctic continues to warm at twice the pace of mid-latitudes and is likely to see warming of up to five degrees Celsius as early as 2040." Bob Weber, "Arctic warming happening faster than previously thought, report says," *Globe and Mail*, Nov. 19, 2017, <https://www.theglobeandmail.com/news/national/arctic-warming-happening-faster-than-previously-thought-report-says/article37024293/> (accessed August 17, 2018).

2017 was the hottest recorded year in the Earth's oceans and the second hottest at Earth's surface. See John Abraham, "In 2017, the oceans were by far the hottest ever recorded," *Guardian*, Jan. 26, 2016, [https://www.theguardian.com/environment/climate-consensus-97-per-cent/2018/jan/26/in-2017-the-oceans-were-by-far-the-hottest-ever-recorded?CMP=Share\\_iOSApp\\_Other](https://www.theguardian.com/environment/climate-consensus-97-per-cent/2018/jan/26/in-2017-the-oceans-were-by-far-the-hottest-ever-recorded?CMP=Share_iOSApp_Other) (accessed August 17, 2018).
  4. See Naomi Orestes' now classic *Science* essay "The Scientific Consensus on Climate Change." More than a decade later, the strong scientific consensus on anthropogenic global climate change noted by Orestes has become even stronger.
  5. I'm pretty certain where my co-caffeine hound got his info about *An Inconvenient Truth*. The fourth item in a Google search of "Inconvenient Truth 10 points" is a page called "8 Highly Inconvenient Facts for Al Gore 10 Years After His Infamous Movie." See <http://www.theblaze.com/contributions/8-highly-inconvenient-facts-for-al-gore-10-years-after-his-infamous-movie> (accessed August 17, 2018). In the third item in the search, "What 'An Inconvenient Truth' Got Right (And Wrong) About Climate Change," Patrick J. Kiger asks scientists to check in with Gore's movie to see where things stand a decade later. While there might be some things off about *An Inconvenient Truth*, in this same article Ted Scambos, a senior scientist at the US National Snow and Ice Data Center, points out "the basic truth, and its inconvenience, remains. In fact, it is clearer than ever that greenhouse gases are a major cause of the observed climate warming." On the Internet, it seems, one can find "evidence" for whatever position one has adopted.
  6. For an analysis of the challenges of communicating about climate change to oft-skeptical communities, see Callison, *How Climate Change Comes to Matter*.
  7. The difficulty of communicating effectively about environmental issues is at the center of the field of environmental communication. See, for example, Hansen, *Environment, Media and Communication*, and Hansen and Cox, eds., *The Routledge Handbook of Environment and Communication*.
  8. Indeed, critics have suggested that this is at the heart of anxieties linked to the consequences of climate change. For instance, Ursula Heise argues that "biodiversity, endangered species, and extinction are primarily cultural issues, questions of what

- we value and what stories we tell, and only secondarily issues of science.” Heise, *Imagining Extinction*, 5.
9. Up-to-date information on the environment produced by the UN’s Intergovernmental Panel on Climate Change can be found online at <http://www.ipcc.ch>, while the text of the Paris Agreement can be located at: <http://www.cop21.gouv.fr/en> (accessed August 17, 2018). A definitive pronouncement of the causes and consequences of climate by the Union of Concerned Scientists has been posted at: <https://www.ucsusa.org/global-warming/science-and-impacts/science/scientists-agree-global-warming-happening-humans-primary-cause#.Wik06yOZM1i> (accessed August 17, 2018). Finally, see Pope Francis, *Encyclical on Climate Change and Inequality*.
  10. Barthes describes right-wing myth as “well-fed, sleek, expansive, garrulous, it invents itself ceaselessly. It takes hold of everything, all aspects of the law, of morality, of aesthetics, of diplomacy, of household equipment, of Literature, of entertainment.” Barthes, *Mythologies*, 148.
  11. For Timothy Morton, true environmental thinking has been blocked by approaches to the environment that re-inscribe the instrumentality to which Martin Heidegger drew our attention. What Morton terms “hyperobjects” are objects, events, and experiences that exceed the individual and local, and so cannot be meaningfully reigned in through existing forms of systemic thought. One of the most important hyperobjects for Morton is the global climate system; another is oil and energy. If the latter has escaped extant epistemologies, and the former exceeds any ability to conceptually frame it (so that, for instance, one might know what “it” is doing in any given place at any given time), it is because the scale of both is such that they necessarily exist outside of existing systems of thought. Morton, *Hyperobjects*.
  12. Szeman, *Zones of Instability*.
  13. “Every nation is one people,” Herder writes, “having its own national form, as well as its own language.” Herder, *Outlines of the History of Man*.
  14. Bauman, *Globalization*, 77–102.
  15. Ghosh, “Petrofiction: The Oil Encounter and the Novel.”
  16. For an overview of the field of energy humanities, see Szeman and Boyer, eds., *Energy Humanities*, and Macdonald and Stewart, eds., *Routledge Handbook of Energy Humanities*. A text that promises to take the field in exciting and intriguing new directions is Bellamy and Diamanti, *Materialism and the Critique of Energy*, a collection that includes contributions from thinkers such as George Caffentzis, Andreas Malm, and Alberto Toscano, among others.
  17. Ghosh, “Petrofiction” and *The Great Derangement*.
  18. Stoekl, *Bataille’s Peak*; Chakrabarty, “The Climate of History: Four Theses”; Mitchell, *Carbon Democracy*; Diamanti, “Energyscapes, Architecture, and the Expanded Field of Postindustrial Philosophy” and “Three Theses on Energy and Capital”; LeMenager, “Petro-Melancholia: The BP Blowout and the Arts of Grief” and *Living Oil*; and Wenzel, “Introduction” to *Fueling Culture: 101 Words for Energy and Environment*.
  19. Horkheimer, *Critical Theory*, 246. Marx’s eleventh thesis reads: “The philosophers have only *interpreted* the world, in various ways; the point, however, is to *change* it.”
  20. Christopher Jones has accused energy humanities of displaying a reductive,



“petromyopia,” one in which it becomes possible, in the end, to explain everything as constituted by fossil fuels. As my comments here should suggest, this is to miss the point of the critical intervention made by energy humanities. Jones, “Petromyopia: Oil and the Energy Humanities,” n.p.

21. Mouhout, “Past Connections and Present Similarities in Slave Ownership and Fossil Fuel Usage,” 339–40. For other such connections between energy and slavery, see Debeir, Deléage, and Hémerly, *In the Servitude of Power*; Johnson, “Energy Slaves: The Technological Imaginary of the Fossil Economy” in *Mineral Rites*; and Nikiforuk, *The Energy of Slaves*.
22. McNeill and Engelke, *The Great Acceleration*.
23. McNeill provides a full accounting of the massive expansion in resource use, especially since World War II, in McNeill, *Something New Under the Sun*.
24. See German Advisory Council on Global Change, *World in Transition 3: Towards Sustainable Energy Systems*; German Federal Ministry for Economic Affairs, *The Energy of the Future*; and Morris and Jungjohann, *Energy Democracy*.
25. With respect to energy, at least, Germany might be an exception: “The Energiewende is nonetheless exceptional in one way too often overlooked. Apart from Denmark and, more recently, Scotland, Germany is the only country in the world where the switch to renewables is a switch to energy democracy.” Morris and Jungjohann, *Energy Democracy*, x.
26. It is unlikely that capitalism could continue easily on, just powered in a different fashion. One main reason is due to the significant changes in Energy Return on Energy Invested (EROEI) over the life of oil capitalism. Current figures suggest that EROEI has been as high as 45 in the 1960s, but has declined to an average of 20, and continues to decline. EROEI on photovoltaics is around 10; for wind the figure is about 20—both well below the cheap energy around which modernity was constituted. See Murphy, “The Implications of the Declining Energy Return on Investment of Oil Production.”

As Jason Moore points out, crises of capitalist accumulation have frequently been managed by appropriating cheap nature. The effective end of cheap nature suggests that such a maneuver is fast approaching an end. See Moore, *Capitalism in the Web of Life*.

27. Even if this were possible—a big if—we would still have to engage in extractivist practices that *cannot* be imagined in relation to a transition in quite the same manner as energy (i.e., one cannot switch to renewable iron ore or copper). Energy use and practices of extraction are closely linked. See the 2017 special issue of *Cultural Studies* on “Cultural Studies of Extraction,” edited by Laura Junka-Aikio and Catalina Cortes-Severio, which includes my afterword, “On the Politics of Extraction,” 440–47.
28. Chakrabarty, “The Climate of History: Four Theses.” Timothy Mitchell puts it just as directly: “Fossil fuels helped create both the possibility of twentieth-century democracy and its limits.” Mitchell, “Carbon Democracy” (2009), 399.
29. Ian Baucom has written: “Although I have for some time accepted the force of Fredric Jameson’s dictum that ‘we cannot, not periodize,’ until very recently it would not have occurred to me that postcolonial study, critical theory, or the humanities disciplines in general needed to periodize in relation not only to capital

- but to carbon, not only in modernities and post-modernities but in parts-per-million, not only in dates but in degrees Celsius.” Baucom, “History 4<sup>o</sup>: Postcolonial Method and Anthropocene Time,” 125.
30. In “Exploring the anthropology of energy: Ethnography, energy, and ethics,” Jessica Smith and Mette High argue that it is necessary to attend to energy ethics in considering energy justice. They write: “We emphasize that our approach takes seriously people’s own ethical sensibilities in relation to energy, working from the ground up, rather than analyzing social life through pre-defined notions of ethics. Energy ethics illuminates the multiple and varied ways that people experience, conceptualize, and evaluate matters of energy in their lives” (n.p.). This attentiveness to the specificity of the distinct uses of energy by communities around the globe is crucial, both as a guiding protocol for the practice of energy anthropology and to give greater nuance to our understanding of energy justice. A motto for energy justice might be “From each according to their energy capacities, to each according to their energy needs (within environmental limits).” See Smith and High, “Exploring the anthropology of energy,” 1.
  31. Arnold, *Culture and Anarchy*, 7.
  32. Williams, “Culture Is Ordinary,” 57.
  33. Williams, “Culture Is Ordinary,” 56.
  34. Williams, “Culture Is Ordinary,” 56.
  35. All figures on energy use are from World Bank, *World Development Indicators*. Available at: <https://datacatalog.worldbank.org/dataset/world-development-indicators>
  36. Debeir, Deléage, and Hémerly, *In the Servitude of Power*, 237.