Edited by

SHEENA WILSON, ADAM CARLSON, and IMRE SZEMAN

PETROCULTURES

Oil, Politics, Culture

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PETROCULTURES

INTRODUCTION

On Petrocultures: Or, Why We Need to Understand Oil to Understand Everything Else

SHEENA WILSON, IMRE SZEMAN, AND ADAM CARLSON

Oil transformed everyday life in the twentieth century. In the twenty-first century, we are finally beginning to realize the degree to which oil has made us moderns who and what we are, shaping our existence close at hand while narrating us into networks of power and commerce far, far away. At the heart of this newfound awareness of oil's importance to our sensibilities and social expectations – our belief, for example, that sociality is of necessity narrated by perpetual growth, ceaseless mobility, and the expanded personal capacities and possibilities associated with the past century's new flood of energy into our lives – is our recognition that over the course of our current century we will need to extract ourselves from our dependence on oil and make the transition to new energy sources and new ways of living. In June 2015, the G7 nations pronounced that the era of fossil fuels would end by 2100. With this declaration (and many more ambitious ones like it),[1] we have embarked upon a social transformation without historical precedent, especially given the scope (the earth's population may reach 9.6 billion people by midcentury) and scale (affecting the infrastructure of the entire planet) involved. Oil transformed life over the century in which we came to depend on it; the looming threat of its absence from our lives means that it will transform us again, from people who are at home and comfortable in the petrocultures we have devised for ourselves to people who will have to shape ourselves to fit contexts and landscapes we can barely imagine, even if we need to do so – and quickly.

To help begin this work of energy transition and transformation, researchers in the arts, humanities, and social sciences have turned

their critical attention toward oil and energy as never before. What distinguishes the scholarly discussions that make up the emerging field of the "energy humanities," to which the essays in this collection are a contribution, is that they position oil and energy as the fulcrum around which many of today's most pressing social, economic, and political issues must be analyzed and understood.[2] The energy transition that will need to take place over the twenty-first century is certainly filled with all manner of technological and political challenges. However, the most significant challenges involved in moving away from fossil fuels to new forms of energy are less matters of technology or public policy than they are social and cultural problems. At issue is not only the kinds of energy we use and depend on – that is, whether we should replace fossil fuels with solar or wind power – but also the purposes to which we put energy, the *why* and *how* of energy. These purposes are varied and extensive, and are folded into every aspect of our lives, linking our deepest hopes and desires to the spaces of energy extraction and to the measure of watts used per person per year. Energy transition will therefore involve not only a change in the kinds of energy we use, but also a transition in the values and practices that have been shaped around our use of the vast amounts of energy provided by fossil fuels.

The lack, to date, of critical intellectual resources by which we might make possible the social transition needed to support and enable energy transition is one of the reasons why ever-increasing public knowledge about global warming has resulted in relatively minimal action to address it. The challenges we face are significant. As Vaclav Smil points out, "lessons of the past energy transitions may not be particularly useful for appraising and handicapping the coming energy transition, because it will be exceedingly difficult to restructure the modern high-energy industrial and post-industrial civilization on the basis of non-fossil – that is, overwhelmingly renewable – fuels and flows."[3] The essays collected in *Petrocultures* provide a map of the social and political challenges of the energy transition we face now, laying bare the complex and contradictory ways oil has shaped our social imaginaries and offering a multifaceted analysis of the claims and assumptions that shape and guide how we think and talk about fossil fuels.

Energy has played an essential role in shaping modern social and cultural life. As many social and cultural critics are now becoming

aware, "the story of human development has been the story of the increased use of energy. Indeed, we can even think of human history as falling into epochs marked by the human ability to exploit various sources of energy."[4] The modern discovery of oil in 1859 in Titusville, Pennsylvania, played a crucial role in enabling the monumental growth of human populations and of the technological innovation that we now associate with the development of modernity. The sixteenfold increase in economic output over the course of the twentieth century required a seventeenfold increase in energy consumption;[5] similar increases in water use, sulphur dioxide emissions, world population levels, and (of course) carbon dioxide emissions are directly related to the expanded economic capacities enabled by fossil fuels.[6] While it would be reductive to see in the expanded use of energy an explanation for every aspect of modernity, it is equally problematic *not* to include energy in our narratives of historical change and development, including social and cultural shifts and transitions. Despite evidence of the importance of energy to the shape of our lives – and of the specific importance of fossil fuels, which have fuelled not just automobiles and the culture of mass individual mobility, but also a consumer era shaped around polymers and plastics (as Kirsty Robertson, Amanda Boetzkes, and Janine MacLeod point out in their contributions to this volume) – we moderns have been almost wilfully blind to its impact on us. Figuring energy in relation to historical developments opens up new insights into the forces of power and politics that have shaped modernity, and demands that we critically explore the surprising limits of aesthetics and representation in relation to energy – an issue addressed by almost every essay in this book.

The twentieth century was transformed by oil. Why, then, has it taken until the twenty-first century for us to begin to grapple with the cultural and social consequences of this transformation and with the substance that made it happen? The importance of fossil fuels in defining modernity has stood in inverse relationship to their presence in our cultural and social imaginaries, a fact that comes as a surprise to almost everyone who engages in critical explorations of energy today. In order to understand how fossil fuels have managed to be hidden in plain sight – an obviously important resource but one whose importance has not been determinately and precisely figured in culture – a great deal of work on petrocultures has examined

the relationship between fossil fuels and literary representation. An early work in the energy humanities is Amitav Ghosh's essay "Petro-fiction."[7] Ghosh poses a simple question. Given the geopolitics of the twentieth century, which has been shaped to an inordinate degree around struggles over oil and gas, why have fossil fuels been thematized in so few of the fictions of the petro-hegemon of the century, the United States? This absence of energy from much of twentieth-century narrative has prompted critics to re-examine literary history, not only to hunt for those few examples of oil fiction that do exist, but also to interrogate the broader relationship between energy, representation, and culture. Glenn Willmott's and Joshua Schuster's explorations of oil in American and modernist literature offer new perspectives on these literary fields. Given the absence of oil from our narratives, these authors also raise questions about the politics of literary representation and our capacity to fully name the forms and forces of modern culture and experience.

Similar investigations into the significance of fossil fuel representation have been undertaken in relation to the visual arts, film, and photography. The absence noted by Ghosh of fossil fuels in twentieth-century literature (and even earlier by Bertolt Brecht, who noted that "petroleum resists the five-act form"[8]) extends to these other areas of culture as well, and the growing critical interest in naming and explaining this absence is reflected in the number of pieces in this volume that situate themselves at the conjunction of energy, aesthetics, and representation. Georgiana Banita and Amanda Boetzkes offer analyses of the aesthetics of petrocultures, probing the way that oil culture shapes and conditions vision. One example of the complex manner in which oil shapes visuality – and how, in turn, modern visuality has been shaped to make it difficult to see oil – is offered in Michael Malouf's investigation of the way our deadened relationship to the social consequences of energy is naturalized in popular children's films, the resource's invisibility reaffirmed even in those films that thematize the need for us to transition to new forms of energy. The possibility of a critical petro-aesthetic – and the challenges of making visible this socially invisible substance – is further explored in Clint Burnham's analysis of Edward Burtynsky's widely known photo-narrative *Oil*. This volume is additionally distinguished by the contributions of Brenda Longfellow, Allison Rowe, and Geo Takach – artists who recognize the challenges that oil has

posed to representation and who work to develop a critico-aesthetic vocabulary so that we might all the more forcefully make oil a part of representation – a crucial step in figuring the true cultural, social, *and* political significance of energy.

Critical engagement with the history and politics of oil is also integral to a fuller understanding of the petrocultures we inhabit. That energy (and fossil fuels in particular) shaped and defined twentieth-century politics is undeniable. The geopolitics of the modern era – everything from colonial expansion, which was underwritten by the energy from coal in the UK, to the ongoing misadventures of the West in the Middle East, to the just-in-time production and container shipping networks of globalization – is tied to availability of and access to fossil fuels. But the impact of fossil fuels on politics goes deeper than this, extending to the very core of our political experience and shaping even our political philosophy, whether we have realized it or not. "The mansion of modern freedoms stands on an ever-expanding base of fossil fuel use. Most of our freedoms are energy intensive," writes Dipesh Chakrabarty.[9] The verities and pieties of liberal political philosophy were imagined against the backdrop of a world with ever-expanding energy resources. In a world in which energy will no longer be so abundant, we now have to revisit and reimagine our energy intensive freedoms.[10] In *Carbon Democracy*, Timothy Mitchell argues that carbon-based energy (first coal and then oil) has played an important role in shaping our contemporary conceptions of democracy – something the West insistently deploys as a rhetorical strategy in justifying expansion projects into oil-rich nations in the Middle East (we bring democracy as we extract oil). Mitchell's research shows the formative role of energy in the political project of democracy and, by extension, the constitution of the modern nation-state and the neoliberal state of the twenty-first century.

Many of the contributions to this volume highlight the political significance of energy resources; they do so not by noting the (undeniable) geopolitical importance of energy, but by alerting us to the deeper political operations of oil and energy. If oil has been hidden in plain sight in cultural representation, this is equally true of its social and political presence. Pipelines serve an important material function in getting energy from extraction sites in the hinterland to the postmodern spaces in which oil and gas are consumed. As

Graeme Macdonald and Darin Barney explain, pipelines also play an important role in making oil invisible, naturalizing its presence in our lives and hiding the environmental impacts of extraction far from the eyes of concerned publics. Barney's essay treats pipelines as an important media form that has played (and continues to play) a key role in the constitution of the Canadian nation-state. As Sourayan Mookerjea shows in his contribution, the redefinition of Canadian nationalism in relation to the country's status as a petro-state (especially during the decade-long reign of Prime Minister Stephen Harper) has had implications for the country's narrative of multiculturalism and its relations with First Nations communities. These subtle re-narrations and re-imaginings of politics as a result of energy have taken place in other oil-producing nations as well, as David McDermott Hughes shows in his investigations of "petro-pastoralism" in Trinidad. Hughes offers an account of the political processes by which broad local support for petro-projects is secured, even given the community worries about the environmental implications of living near extraction sites. Michael Truscello argues that we need to see nation-states as complex petro-modern assemblages whose action and activities include by-products – like the poisons in water systems mapped in Janine MacLeod's essay – that will outlive contemporary political arrangements by hundreds of years. These essays point to political contexts and circumstances produced by oil and fossil fuels, and the range of new political questions that arise from a critical focus on energy.

Just as politics has been shaped by and in reaction to oil, so, too, have many of our most important concepts and theories. Once again, as with the link between politics and energy, the shaping influence of fossil fuels on philosophy and critical theory has had an impact on how we view the present and our collective ability to respond to the problems and provocations of a fossil fuel society. Andrew Pendakis explores oil as the hidden Real of metaphysics and matter in the modern era – the *ur*-commodity that constitutes a key component of ontological essence and which is also a prime source of value. Tim Kaposy argues that oil necessitates new forms and modes of historiography in order to capture the substance's power and impact, especially if we are to ever organize ourselves in relation to energy alternatives. Randy Schroeder's engagement with Allan Stoekl's *Bataille's Peak* – one of the only extended encounters

between philosophy and oil – is intended to unsettle the assumptions informing the concept of "sustainability," arguing that the rational instrumental philosophy that shapes sustainability is the self-same one that produced our environmental and energy crisis. In his contribution, Mark Simpson critiques the ideology of "lubricity" – the contemporary fantasy world we inhabit, one of smooth flows of people, resources, and capital that demands intensified use of petrocarbons to keep everything moving.

These essays track dangerous logics and concepts – ideas that are threatening either because of their (hitherto unexplained) link to fossil fuel energy or because they impede our capacity to fully address environmental problems. The logics that shape our present have been passed down to us, some dating back millennia and grounded in religions and cultural beliefs about what it means to be human and to live in society, others a product of Western Enlightenment modes of relating to the world – of Keynesian models of growth and progress, Cartesian dualism resulting in racial and gender subjugation, the ideologies governing conquest and colonialism – that now undergird the nation-state system and global business alliances alike.[11] Now, suddenly, within a generation or two, we need to confront from within our current conundrum, and without the luxury of objectivity or distance, how to reinvent and reimagine our lives and the concepts and philosophies that have long shaped them.

Oil has transformed life, and in a deeper and more profound way than one might first imagine. The contributions to *Petrocultures* highlight this in multiple ways, drawing attention to energy's shaping influence, at once cultural, social, and political. We recognize that it can seem like an overstatement to claim that energy and fossil fuels in particular have had such a determinate historical influence, especially given energy's long absence from critical consideration. The question might be posed: If energy was so important, why hadn't we noticed before now? And yet, its importance to shaping our lives is significant, reaching across the register of our experiences and moving from the concrete and material to the abstract and immaterial. To take just one example: to be modern is to be mobile as never before. At the heart of this mobility is the culture of the automobile. In the West, the automobile has been imbricated as a normal and necessary tool for personal independence and the successful management of a nuclear family, which in and of itself is intrinsic to the

neoliberal construction of personal success. The promotion of the nuclear family as the accepted social norm has had significant ramifications for women and men, who must independently reproduce in each household tasks that, had they been socioculturally constructed otherwise, could have easily been industrialized, thereby relieving many women and families of a significant amount of domestic labour.[12] The housing needs of the nuclear family home have shaped the design of urban and suburban living in petrocultures, just as the number of consumer goods and services necessary to run a single residence has created a large capitalist marketplace. These socially constructed relationships to consumer products – whether it is the automobile, or even women's fashion and cosmetic products, including silicone breast implants – have been naturalized to such a degree that they are being upheld in twenty-first-century advertising campaigns as symbols of Western women's equality and freedom. By proxy, non-Western women's inability to access these products is upheld as evidence of women's oppression.

Advertising images as well as cinematic and cultural narratives represent the largely uncritical socio-cultural acceptance of the automobile as a symbol of our own individual freedoms. These ideals of liberty or emancipation have been constructed very differently according to one's subject position relative to cis-heteropatriarchal normativity. Ultimately, however, mobility is part of the construction of a petro-capitalist economy in which the car and other petroleum-powered machines and petroleum-derived consumer products become inextricable from the modern imaginary. As Andrew S. Gross argues, "the most common trope of driving – 'the freedom of the road'" popularized in the early twentieth century is linked to market strategies that were targeting women as consumers. In fact, he argues, "the woman driver quickly became the central figure of consumerism. Gender, in fact, turns out to be an important strategy for mediating some of the conflicts and anxieties attending the transition to a consumer-oriented economy."[13] Within this system, women become both consumers of automobile culture as well as commodities within the same circular network.[14] As Cecily Devereux discusses in her chapter, women and cars, in many instances, are made synonymous with one another, the automobile being perceived as an object of desire and either equated to or accessorized by a woman: both objectified and both fetishized. Our relations and our gendered

relationships to commodities and the identity tropes they embody have been figured as the natural outcome of oil and progress, when in fact they form a complex series of socio-cultural entanglements in the West over the last two centuries, culminating in neoliberal politics and economics. Freedom, identity, success: our deepest ideals and most prominent social fantasies are mediated and enabled by the energies of fossil fuels. Capitalist imperatives ensure that we measure what we value; therefore, transformation will require a radical shift in worldview and how we attribute meaning. Oil prices are indexed daily. That which does not neatly fit into such indexes is rendered valueless as an externality or even casualty to this structural violence: glaciers, clean water, clean air, environmental rights, Indigenous rights, Indigenous peoples, the Missing and Murdered Indigenous Women (MMIW) in Canada. In her work, Audra Simpson makes a strong critique of the genocidal project of extractivism, whereby the handmaidens of white supremacist cis-heteropatriarchal petrocapitalism deploy specific logics in the name of nation building and economic growth that require the eradication of certain bodies, in particular those of Indigenous women: the original owners of the oil- and resource-rich lands now occupied by settler Canadians.[15] The colonial project of the nation relies on the pillage of natural resources and the construction of race, class, and gender, which reify some people as resources to be exploited, resulting in socio-cultural paradigms where some lives matter more than others. However, for extraction to carry on, this reality must be denied, as former Prime Minister Stephen Harper and the Conservative Party of Canada did for a decade (up until 2015), in order to push through environmentally damaging industrial projects and legislation.

As the field of energy humanities develops, it will need to pay greater attention to the uneven impacts of fossil fuels on human communities. Our oil-fuelled neoliberal economies and the vicious, voracious practices of globalization have created conditions of increasing disparity between rich and poor, and have feminized/wife-ized (in other words, rendered precarious) whole new strata of the global population over the last half century. Such reorganizations have increased the wealth of a few elites built on a foundation of short-term, part-time contracts with masses of overworked debtors. All of this has been accomplished as markets drive personal aspirations toward increased consumption (on the one

hand) while reducing wages and salaries, proclaiming we must all "do more with less" in the workplace and public sphere (on the other). We must work harder and expect less in return, in terms of social security and social services – the commons, and the common good, constantly being eroded. This reality has reproduced itself time and again, the planet over.[16] Extractivist, capitalist production has resulted in what is now being referred to as the Anthropocene: human-induced climate change on such a scale and to such a degree that it can now be mapped within geological time.[17] Of course, this geological term redistributes responsibility for the negative impacts on our planetary ecosystem to all "humans," when these outcomes have largely been caused by populations in the global West, and by those with the greatest access to *power* – fossil fuels and capital – within those zones.[18]

To successfully undertake an energy transition in this century, it is essential to unravel these logics and our attachments to them in order to better understand the material and immaterial infrastructures and superstructures that shape our daily lived realities and govern our choices and mobilities within existing social, economic, and political networks. *Petrocultures* is an attempt to name and explain some of the key aspects of this monumental challenge – an early step in a still-unfolding cultural, social, and political project.

This collection is composed of twenty-one chapters that touch on oil issues in almost every corner of the globe: from the Arctic to Scotland to Saudi Arabia; from Alberta's oil sands and Ontario's manufacturing regions to the Gulf of Mexico; from Iraq and Kuwait to China and India; and from Nigeria to Trinidad and Tobago. The authors analyze a range of social and political discourses – sometimes regional, sometimes national, and at other times planetary – that, when taken together, illustrate the ways that oil has been valorized and has thus transformed life as we know it. Many of the contributors specifically address oil as it is represented in cultural productions, including the visual arts, popular culture, corporate advertising, and national branding campaigns – for example, in the photography and filmmaking of Edward Burtynsky, Jennifer Baichwal, Peter Mettler, Emmet Gowin, Ursula Biemann, Allan Sekula, Ernst Logar, Matt Coolidge, and George Osodi; in the visual and installation art of Portia Munson, Song Dong, Melanie Smith, and Choi

Jeong-Hwa; in modernist poetry, pulp fiction, and the literature and criticism of Upton Sinclair, Stephen King, and Amitav Ghosh; in the lyrics of such songs as "Baby Got Back" (1992) and "Mustang Sally" (1965); and in the films watched by a generation of children who have grown up seeing oil culture animated by Pixar.

The chapters have been organized into six sections, grouped in ways that, when read against one another, provide added layers of nuance and meaning that help to outline what it means to live in a twenty-first-century petroculture and what it might mean to extract ourselves from our petro-driven realities. Energy humanities scholars are interdisciplinary and come to issues around oil and energy drawing on a range analytic traditions. The styles of some contributors reflect their backgrounds in social and political thought and cultural studies, while others draw on practices more typical of literary analysis and close reading. Still others, such as Geo Takash and Allison Rowe, represent creative research interventions that mobilize visual and textual imaginaries of the past and present to render visible specific networks in the web of planetary oil relations. The multidisciplinarity of this collection and the interdisciplinary work of the individual chapters is representative of ongoing work in the energy humanities – a field in which scholars are collectively tackling new and arising environmental and social challenges.

The essays collected here were presented at the first Petrocultures conference, held at Campus Saint-Jean of the University of Alberta in September 2012. As academics working in literary and cultural studies in Alberta and living in Edmonton, the largest city located closest to the Alberta oil sands, we could not avoid studying the impact and effects of fossil fuels on the space and place in which we lived. Since the turn of the century, when extraction activity in Northern Alberta ramped up significantly, the oil sands have become one of the world's most important sites of struggle over our energy and environmental futures. This especially dirty source of energy, with an extremely low energy return on energy invested (an EROEI of about 3.0),[19] has become for many an index of everything that is wrong with the way in which we use energy today. The oil sands have become increasingly visible in recent years due to the struggle over the Keystone XL pipeline – which was supposed to transport oil from Alberta across the Canada-US border to refinery and storage facilities in Oklahoma – and the other major pipelines proposed to take

oil from the oil sands to Canada's east and west coasts. When we[20] began the Petrocultures Research Group at the University of Alberta in 2010, we were surprised by the gaps we found in the critical literature on fossil fuels in general and on the oil sands in particular. While there were existing activist and environmental texts advocating for renewable and sustainable energy, and historical studies of oil and energy systems (notably the groundbreaking work of David Nye),[21] investigations of the social imaginaries brought into being by the energies of fossil fuels – which is what we termed "petrocultures" – were in short supply.

It was in an effort to canvas the existing state of research into petrocultures that we staged the 2012 conference, which was originally planned to take place over one-and-a-half days. The response to our call for papers came as a pleasant shock and surprise. We received so many proposals – and so many superb ones – that the inaugural conference became a six-day event: a Petrocultures art show at Gallery@501 in Sherwood Park, Alberta, four days of sharing papers in Edmonton, and a two-day trip to the home of the oil sands in the Regional Municipality of Wood Buffalo (with one day in the town of Fort McMurray, Alberta and a day spent with community members, leaders, and elders in the Métis and First Nations community of Fort McKay). A second Petrocultures conference, held in 2014 at McGill University in Montreal, confirmed this initial flurry of interest: researchers from around the world are posing the questions and seeking the answers to the ways in which oil and energy have shaped our forms of being, belonging, and behaving. The third Petrocultures conference, held in 2016 at Memorial University in St John's, has established this biennial conference as a major event, gathering scholars from around the world and across the disciplines who are investigating the social, cultural, and political implications of energy practices and systems. As the field of energy humanities develops, expanding to cover more and more territory geographically, conceptually, and historically, it has become possible to identify areas of petroculture that require more critical exploration than they have received thus far. In 2015, in conjunction with colleagues at the University of Alberta, the Emily Carr University of Art and Design, and the University of Manitoba, we co-authored a report that was intended to gather knowledge about research on Indigenous communities and energy, and research-creation projects on fossil fuel

cultures and environmental change.[22] The collection of essays that we have brought together here deals with a wide range of issues and topics related to the significance of energy for contemporary society. As we are still near the beginning of our collective exploration of energy humanities, it is necessary to continue to expand the scope of investigation. We expect that *Petrocultures* will set the stage for deeper, more extensive, and more expansive analyses of energy and power, with specific attention to the sites and spaces in which energy intersects with class, gender, and race – particularly in relationship to treaty rights and traditional Aboriginal energy-use practices,[23] given the central role of Indigenous communities not only in providing insights into other modes of engaging with the environment, but also in approving or resisting extraction projects.[24]

As criticisms of carbon- and energy-intensive projects become increasingly common, we need more than ever a critical project adequate to energy's pervasiveness across contemporary experience. As scientists and publics mobilize knowledge into new calls for moratoriums,[25] debates about oil have stalled around the predictable opposition of environment versus economics, drill versus don't drill. We can neither give up oil all at once, nor can we continue to shape our societies around it: as is so often the case, here, too, each pole of the "either/or" discussion on fossil fuels constitutes a way of avoiding the real questions that need to be answered. The purpose of studying the petrocultures we inhabit is to uncover and elaborate the political potential and theoretical nuances crowded out in current forms of public discourse. *Petrocultures*: *Oil, Politics, Culture* provides much-needed research that addresses head-on the conceptual, philosophical, and theoretical challenges that emerge from a sustained examination of the social and cultural significance of energy in various forms, oil being only the most prevalent form at present. As an ongoing project, the study of petrocultures confronts critical issues around oil and energy, providing crucial insights into what it means to live at this historical moment and what we need to do to imagine and create new ways of being.

Oil and its outcomes – speed, plastics, and the luxuries of capitalism, to name a few – have lubricated our relationship to one another and the environment for the duration of the twentieth century. As we struggle to transition to less carbon-intensive energies and lifestyles, this collection provides scholars and engaged publics with a

more nuanced understanding of oil as an energy source and substance imbricated into every aspect of our daily lived realities. Oil transformed our lives in the twentieth century. Might we transform our lives in the twenty-first century, reshaping our petrocultures into societies whose energy use doesn't imperil the future and the environment we inhabit?

NOTES

1 For instance, in June 2016 Norway proclaimed that it would aim to have net zero carbon emissions by 2030 by severely limiting fossil fuel use. See Arthur Neslen, "Norway Pledges to Become Climate Neutral by 2030," *Guardian*, 15 June 2016, accessed 4 July 2016, https://www.theguardian.com/environment/2016/jun/15/norway-pledges-to-become-climate-neutral-by-2030.

2 For Dominic Boyer and Imre Szeman, "energy humanities" is a field that contends that "our energy and environmental dilemmas are fundamentally problems of ethics, habits, values, institutions, beliefs and power – all areas of expertise of the humanities and humanistic social sciences." See Boyer and Szeman, "The Rise of the Energy Humanities," *University Affairs* (March 2014): 40.

Though this field is still nascent, this present collection is in dialogue with several works: Ross Barrett and Daniel Worden, eds., *Oil Culture* (Minneapolis: University of Minnesota Press, 2014); Dominic Boyer and Imre Szeman, eds., *Energy Humanities: An Anthology* (Baltimore: Johns Hopkins University Press, 2017); Gerry Canavan, Lisa Klarr, and Ryan Vu, "Ecology & Ideology," *Polygraph* 22 (2010): 1–32; Amitav Ghosh, "Petrofiction," *New Republic* 2 (March 1992): 29–34; Peter Hitchcock, "Oil in an American Imaginary," *New Formations* 69.4 (2010): 81–97; Matthew Huber, *Lifeblood: Oil, Freedom, and the Forces of Capital* (Minneapolis: University of Minnesota Press, 2013); Stephanie LeMenager, *Living Oil: Petroleum and Culture in the American Century* (Oxford: Oxford University Press, 2013); James Marriott and Mika Minio-Paluello, *The Oil Road: Journeys from the Caspian Sea to the City of London* (New York: Verso, 2013); Timothy Mitchell, *Carbon Democracy* (New York: Verso, 2011); Naomi Oreskes and Erik Conway, *The Collapse of Western Civilization: A View from the Future* (New York: Columbia University Press, 2014); Allan Stoekl, *Bataille's Peak: Energy, Religion, and*

Postsustainability (Minneapolis: University of Minnesota Press, 2007); Imre Szeman, Jennifer Wenzel, and Patricia Yaeger, eds., *Fueling Culture: 101 Words on Energy and Environment* (New York: Fordham University Press, 2017); Sheena Wilson and Andrew Pendakis, eds., "Sighting Oil," *Imaginations* 3.2 (2012); and Patricia Yaeger et al., "Literature in the Ages of Wood, Tallow, Coal, Whale-Oil, Gasoline, Atomic Power and Other Energy Sources," *PMLA* 126:2 (2011): 305–26.

3 Vaclav Smil, *Energy Transitions* (New York: Praeger, 2010), 105.

4 Dale Jamieson, "Energy, Ethics and the Transformation of Nature," in *The Ethics of Global Climate Change*, ed. Denis G. Arnold (Cambridge: Cambridge University Press, 2011), 16.

5 Smil, *Energy Transitions*, 14.

6 See J.R. McNeill, *Something New under the Sun: An Environmental History of the Twentieth-Century World* (New York: Norton, 2000).

7 Ghosh, "Petrofiction."

8 Bertolt Brecht, *Brecht on Theatre*, ed. and trans. John Willett (New York: Hill and Wang, 1977), 29.

9 Dipesh Chakrabarty, "The Climate of History: Four Theses," *Critical Inquiry* 35 (2009): 208.

10 In *A Theory of Justice*, political philosopher John Rawls famously begins his elaboration of the principles of social justice by articulating a thought experiment – the "original position" – a hypothetical ground zero from which the principles of liberalism were reconstituted. Rawls doesn't consider the impact of available energy on the principles established within the thought experiment. How might these principles look different if they had to account for energy justice as well as social justice? Might an awareness of declining levels of energy alter the principles advocated? Rawls, *A Theory of Justice* (Cambridge, MA: Belknap Press, 1999).

11 Ruth Irwin provides an excellent overview of the range of logics that undergird modern social life in "Ecological Ethics in the Context of Climate Change: Feminist and Indigenous Critique of Modernity," *International Social Science Journal* 64.211–212 (2013): 111–23.

12 Ruth Cowan details social experiments in industrializing aspects of women's domestic work – such as laundry and cooking – which ultimately failed in the face of socio-cultural pressures and advertising campaigns. For example, a market for the washing machine was created by undermining industrial laundries via discourses of suspect

hygiene, which were linked to racism. Cooking as the responsibility of each mother-wife was reinforced through concerns about how communal kitchens and other social-housing experiments that eliminated this task from daily life posed a threat to Western family values and insinuated parallels with communism. 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: Basic Books, 1983) for a detailed analysis of the ways in which technological development has affected (or not affected) gendered divisions of labour.

13 Andrew S. Gross, "Cars, Postcards, and Patriotism: Tourism and National Politics in the United States, 1893–1929," *Pacific Coast Philology* 40.1 (2005), 85.

14 For more details on the gendered aspects of oil and energy, see Sheena Wilson's "Gendering Oil: Tracing Western Petro-Sexual Relations," in *Oil Culture*, ed. Barrett and Worden, 244–66.

15 See, for instance, Simpson's talk, "The Chiefs Two Bodies: Theresa Spence and the Gender of Settler Sovereignty," at "Unsettling Conversations, Unmaking Racisms and Colonialisms," RACE Network's 14th Annual Critical Race and Anticolonial Studies Conference, University of Alberta, Edmonton, accessed 20 August 2016, https://vimeo.com/110948627.

16 This argument concerning the genocidal, gendered, and human rights aspects of oil and energy is more extensively described in Sheena Wilson's "Energy Imaginaries at the Impasse," *Materialism and the Critique of Energy*, eds. Brent Bellamy and Jeff Diamanti (Chicago and Edmonton: MCM Prime Press, 2017). See also Sheena Wilson, "Oil Ethics," *American Book Review* 33.2 (2012), 8–9; and "Gender," in *Fueling Culture: 101 Words on Energy and Environment*, ed. Imre Szeman, Jennifer Wenzel, and Patricia Yaeger (New York: Fordham University Press, 2017).

17 See Paul J. Crutzen and Eugene F. Stroemer, "The Anthropocene," *IGBP [International Geosphere-Biosphere Programme] Newsletter* 41 (2000): 17.

18 See Donna Haraway, "Anthropocene, Capitalocene, Plantationocene, Chthulucene: Making Kin," *Environmental Humanities* 6 (2015): 159–65; and Jason Moore, *Capitalism in the Web of Life: Ecology and the Accumulation of Capital* (New York: Verso, 2015).

19 See A.R. Brandt, J. Englander, and S. Bharadwaj, "The Energy Efficiency of Oil Sands Extraction: Energy Return Ratios from 1970 to 2010," *Energy* 55 (2013): 693.

20 "We" in this context refers to the first two authors, who founded and co-direct the Petrocultures Research Group.

21 See, for instance, Nye's *Electrifying America: Social Meanings of a New Technology, 1880–1940* (Cambridge: The MIT Press, 1992).

22 See Imre Szeman et al., "On the Energy Humanities: Contributions from the Humanities, Social Sciences, and Arts to Understanding Energy Transition and Energy Impasse," SSHRC Imagining Canada's Future initiative, Knowledge Synthesis Grants: Energy and Natural Resources. 13 May 2016. Available at http://www.ideas-idees.ca/sites/default/files/sites/default/uploads/general/2016/2016-sshrc-ksg-szeman.pdf.

23 Warren Cariou, "Aboriginal," in *Fueling Culture: 101 Words on Energy and Environment*, ed. Imre Szeman, Jennifer Wenzel, and Patricia Yaeger (New York: Fordham University Press, 2017).

24 To take just one example, in Canada in June 2016, the Northern Gateway Pipeline approval was overturned by the federal courts, based on a failure of the company backing the pipeline to consult with First Nations.

25 Sheila Pratt, "Researchers' Open Letter Calls for Moratorium on New Oil Sands Projects," *Edmonton Journal*, 10 June 2015, accessed 10 June 2015, http://www.edmontonjournal.com/Researchers+open+letter+calls+moratorium+oilsands+projects/11125320/story.html.