On Petrocultures

Globalization, Culture, and Energy

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Pipelines and Territories: On Energy and Environmental Futures in Canada (2018)

I want to provide an analysis of the politics of pipeline expansion and development in Canada since the beginning of the twenty-first century. My aim in doing so is not only to outline the vexed drama of pipelines in Canadian political life, but also to see what a focus on pipelines might teach us about the politics of oil and the environment at the present time, and what it might tell us, too, about the energy futures into which we are moving.

The existing system of oil and gas pipelines in North America is massive. There are more than 840,000 km (522,000 miles) of pipelines in Canada alone, which includes 117,000 km (72,700 miles) of large-diameter transmission lines of the kind on which I'll be focusing.[1] In addition to the pipelines that crisscross each country on the continent, there is also a significant network of cross-border pipelines, including major pipeline networks built as recently as 2010 that cut across the US/Canada border. While pipelines have drawn media and political attention in the past—most notably, in Canada, in relation to the Mackenzie Valley Pipeline Proposal and the Berger Inquiry—the past several years have seen pipeline construction become front-page news in Canada and the United States.[2] Why? What has changed about pipelines that has made these deliberately invisible forms of infrastructure now visible? And in turn, what does this new visibility say about environmental and cultural politics in relation to infrastructure such as pipelines?[3]

I approach these questions by first surveying the politics of three major pipeline projects that are pressing issues of public policy in

Canada—the Northern Gateway, Energy East, and Trans Mountain Expansion pipeline projects—and a fourth that has made headlines in Canada, the United States, and around the world: the Keystone XL pipeline project, which was killed in November 2015 by an executive decision of President Barack Obama and revived by President Donald Trump in 2017.[4] I follow this with an exploration of *pipeline theory*—an elaboration of the physical and conceptual dynamics of this particular form of infrastructure and the politics that it calls into being—before concluding with an all-too-brief (but hopefully suggestive) discussion about the role that pipelines, in their sheer materiality and new visibility, play in politics today—and not just politics of the environmental kind.

A. Border Crossings: The Politics of Pipelines

In January 2016, the new government of Canadian Prime Minister Justin Trudeau announced that the federal government had decided to mandate additional reviews to assess the environmental impact of new pipeline projects. The government was also instituting a requirement that pipeline companies engage in further consultations with First Nations communities about all of the major pipelines currently being proposed, and offered funding to these communities so that they might expand community consultation on the Energy East pipeline project in particular.[5] This announcement of new environmental reviews came on the heels of a report issued by the office of the federal environment commissioner, which severely criticized Canada's National Energy Board (NEB) for its failure to track whether companies actually meet the conditions set out in the approval process.[6] In the past, the NEB had been repeatedly criticized for giving an easy pass to energy projects; now it would have to devote more time and energy to making sure that new projects meet criteria that an environmentally conscious public was demanding of infrastructural projects.

For most in a country that depends on natural resources (and fossil fuels in particular), these announcements by the Trudeau government came as a surprise. For several years, the large decline in the price of oil had meant far fewer dollars flowing into both federal and provincial

government coffers (as of May 2018, the price of a barrel of West Texas Intermediate crude was about $75 CAD—higher than it had been for years, but still below its price in January 2015, when it was over $100 per barrel). In February 2016, the federal Liberal government announced a projected budget deficit of $30 billion dollars for the coming year—a huge deficit in Canadian terms and triple the already large deficit that the Liberals had anticipated for 2016 at the end of 2015. The Liberals also announced significant transfers of federal funds to the province of Alberta, the largest producer of oil and gas in the country, and the province most deeply impacted by the decline in oil prices. The Trudeau government's announcement of additional environmental assessments extended substantially the length of time it takes for pipeline assessments—or at least in theory. In the case of Energy East, for instance, it was estimated that it would increase the assessment time by at least half—if, that is, the NEB is properly able to undertake its new mandated task at all: measuring the impact of the new pipelines on greenhouse gas emissions in Canada, both in the present *and* in the future.[7] Those clattering alarm bells the loudest were, of course, industry leaders who, if not opposed to the new assessments altogether, were questioning the timing of their imposition given present economic circumstances for the industry. Those applauding the Trudeau government's decision included not only the environmental community and First Nations, but also political leaders in British Columbia and Quebec, including the mayors of many of the communities through which proposed pipelines would cut; these were the same groups and individuals who had been most critical of the federal government as it reversed its original hardline stance, specifically in the case of Trans Mountain Expansion, which was approved in January 2017.

If pipelines have become one of the signal issues in contemporary Canadian politics—now less a surprising political hot topic than one treated by media and public alike as a matter of obvious import—it is because these infrastructural assemblages capture the key political anxieties, divisions, and struggles shaping the country at the present time. These tensions and struggles can be grasped in two editorials written days apart in the *Globe and Mail* early in the Trudeau government's first year. On January 24, 2016, the *Globe* applauded Prime Minister

Trudeau's expansion of environment assessments on pipeline projects, while also insisting

> It would be a huge mistake on his part to fail to sell the merits of Energy East. . . . Mr. Trudeau needs to persuade Canadians of the fact that a healthy energy sector is a key part of a healthy economy, and of the consequence flowing from that: Oil must move. Where pipelines can transport oil safely, efficiently and in an environmentally respectful way that passes muster with a timely, arm's-length review process, they should be built.[8]

A week later, the same newspaper urged the new PM to take a leadership role in getting Canadians on track with the policy decisions the country will need to take if it is going to address levels of greenhouse gases: "to produce the kind of sharp drop needed between now and 2030, Canada will have to amputate, not nip and tuck."[9] This is, to say the least, a mixed message: Canada needs to get serious about its economy, and so it needs pipelines; Canada needs to get serious about its environment, and so more pipelines moving more oil might be the last thing it needs. In the drama of pipeline politics, Canadians are encountering the political schizophrenia produced when capitalist societies try to address global warming through the same mechanisms that generated the condition in the first place. The capital generated by the oil sands is needed, it is often argued, in order to create new technologies through which the consequences of oil sands production and consumption can be addressed. The obvious contradictions of such a view has meant that it has been easier for publics to deal with one part of the issue at a time—as with the *Globe* editorial, fully in support of pipeline expansion on Monday, fully in support of strong environmental policies on Friday. Nothing in the period since these editorials were written has altered this slip-and-slide, back-and-forth commitment to both the environment *and* pipeline and energy projects—an indictment of the business-as-usual approach to climate change that has characterized the programs of governments around the world. Indeed, the failure of the Trudeau government to live up to its initial obligations to an expanded consultation process, and its backsliding on commitments

to communities and First Nations, points to the power that resource money continues to have on politics in Canada.

Pipelines are a matter of geographic and economic necessity everywhere they are found, but especially in Canada. Alberta is the major site of oil production in Canada; the oil sands have been estimated to contain 178 billion barrels of economically recoverable oil (the third largest known oil reserve on the planet after Saudi Arabia and Venezuela). Alberta is also one of only two landlocked provinces in Canada. Without a port of its own through which to supply oil to global markets, the province has only ever been able to supply a single customer—the United States (Canada is the largest single supplier of foreign oil to the United States; Canadian production in 2014 was 3.535 million barrels per day, of which 3.388 million went to the United States).[10] The pipeline projects that have generated public debate and discussion in Canada are owned by different companies and travel different routes. However, all have the same ambition: to move oil from Northern Alberta to coastal ports so that it might find new markets and higher prices. The four-phased Keystone project (three phases of which are complete, including a cross-border pipeline running from near Edmonton, Alberta, to a tank farm in Patoka, Illinois) is intended to drag Canadian oil all the way to the refineries of Port Arthur, Texas. Enbridge's Northern Gateway project pipeline (which is, as of 2018, apparently dead) was designed to connect the oil sands up with the growing Asian market for energy, and would run from just north of Edmonton to the north coast of British Columbia.

Other pipeline projects have also made news in recent years: Kinder Morgan's Trans Mountain Expansion project and TransCanada's Energy East. Trans Mountain is a proposed expansion of an existing pipeline that runs from Edmonton to Burnaby, British Columbia. As an expansion of an existing pipeline entails a quicker and less stringent review process, Trans Mountain anticipated relatively little difficulty in getting the project approved, becoming in the process the company to have hit the oil sands export jackpot. Unfortunately (for Kinder Morgan, at least), the pipeline ends in one of the most environmentally sensitive regions of the country: the Lower Mainland of British Columbia. Kinder Morgan's proposed project has produced a ferocious response, including protests

on Burnaby Mountain where Simon Fraser University is located; these led to threats of imprisonment for some of the lead protestors, including poet and professor Stephen Collis.[11] The city of Burnaby has also challenged the authority of the National Energy Board to make decisions about the pipeline project on its behalf, and the city's mayor, Derek Corrigan, has stated that he would be willing to end his career by getting arrested while attempting to stop the pipeline.[12] Despite this and other resistance to the project, it was approved by the Trudeau government in January 2017. Even in the wake of the approval, resistance to the expansion remains active. In 2018, the decision by the newly elected government of British Columbia to cancel the Trans Mountain pipeline has been actively opposed by the federal government and the Alberta government, and has made the front pages of newspapers across Canada.

The pipelines under discussion are of incredible length: the proposed Keystone XL pipeline is almost 1900 km (1181 miles) long, while the completed first phase of the Keystone project is nearly 3500 km (2175 miles) in length. Even this massive pipeline is dwarfed by a second proposed TransCanada project: Energy East, which would extend from Alberta to refineries in Montreal, Quebec City, and Saint John, New Brunswick (at this last site, Irving Oil has announced plans for a $300-million refinery terminal that would employ oil delivered by Energy East). When completed, the $15.7 billion Energy East would be the longest pipeline in North America and one of the longest in the world.

Even after the Trudeau government's recent warming toward the oil industry, Energy East still faces delays due to the new environmental regulations being imposed by the federal government. It also faces many of the same blocks and limits that the other pipeline projects have faced. Many affected communities, including Kenora and North Bay, Ontario, oppose it, and former Montreal mayor, Denis Coderre, publicly challenged the merits of the project. Environmental groups have also been aggressive and proactive in their opposition to Energy East. To give just one example, in mid-February 2016, a coalition of environmental groups filed a motion against TransCanada pipelines in Quebec Superior Court, claiming that the company had failed to file a project notice with the province's Environment Department; the filing of such a notice would

trigger an environmental impact assessment at the provincial level. Finally, as with the other pipeline projects I've mentioned, Energy East faces challenges by many First Nations communities. By remaining in Canada and staying away from the pristine West Coast, it appears that supporters of Energy East in government and industry had hoped to sidestep some of the issues that have plagued other pipeline projects. But the length of the Energy East pipeline comes with its own problems, including the fact that it will cross 180 First Nations territories. There are a huge number of groups and communities to appease before oil starts traversing the length of the country—an industrial behemoth as symbolically expressive of the ties that bind Canada in the twenty-first century as the railroad in the nineteenth and the TransCanada Highway in the twentieth.

B. Pipeline Theory

Despite the various actors involved in each of the projects I've described, the fundamental issue at work in all of them is the same. What shape should our energy future take? Are Canadians going to continue using fossil fuels to fuel their economies in the short and (perhaps) long term? Or can we imagine a shift in our use of fossil fuels that might lead to a real change in the impact of hydrocarbons on the environment—not a partial shift, a temporary shift, or a haphazard shift, but a move that says: we're done with the fossil-fuel era and all the imaginaries it has birthed? Whether it has been governments, First Nations communities, academic communities, or environmentalists that have challenged Canadian pipeline expansion, the focus of their efforts has been to attract public attention to its environmental and social impact. For those who have opposed its expansion and extension, more pipeline infrastructure in Canada can't help but lead to greater CO_2 emissions. Even without these massive projects, Canada is poised to generate 857 megatons of CO_2 by 2020, missing the modest mark of 611 megatons of CO_2 by 2020 that the country set for itself in advance of the 2015 COP21 meeting in Paris. Without a significant change in how the country imagines its relationship to fossil fuels, Canada will become the worst of the OECD countries as measured by its ability to reach its climate

targets.[13] In this respect, at least, the new Trudeau government looks to be little different from the former government of Stephen Harper. Despite the fact that it is more conscious of and alert to the reality of climate change and the necessity of developing policy to address it, it has done little to move Canada away from fossil fuels, other than to propose a carbon tax that is both regressive and ineffectual. Indeed, in the wake of a decade of aggressive Conservative politics, the new federal Liberal government and the presence of NDP governments in Alberta and British Columbia have tended to ease the fears of the Canadian public about the environment—a disaster in the making, which future governments will be hard pressed to set aright.

As I have already indicated, pipelines have become a symbolic site to enact the broader politics of the environment in Canada; they have come to play a significant role in the United States, too, as a result of struggles over Keystone XL and protests at Standing Rock over the Dakota Access Pipeline. *Why* pipeline infrastructure has taken on this role is less obvious than it might seem. Throughout their history, oil pipelines have (with some notable exceptions) aspired to be invisible. As Darin Barney reminds us, "just as it is best when digital networks deliver us images, sound, and text wherever and whenever we want them without bothering us, it is best (at least from the perspective of energy capital, energy states, and energy consumers) when pipelines deliver energy without anybody noticing them."[14] Dull, dead, apparently meaningless rods of steel and plastic, pipelines are *everywhere*—a vast capillary network linking extraction sites to fuel terminals, terminals to refineries, and refineries to factories, businesses, and homes. The most significant feature of this massive system is that it has managed to remain invisible even as it has expanded to supply increasing levels of product to an ever-expanding economy and population. The majority of Canadians would have no idea where to find a supply pipeline in their community, and would find it even harder to point to the massive cross-border pipes that hold the system together; it's no coincidence that those for whom pipelines are all too visible—those in impoverished or rural communities, or indigenous Canadians whose territories pipelines often crisscross—have until recently had their voices ignored in relation to decisions by government and industry.

This invisibility does not mean that pipelines are insignificant. Far from it. A map of the major pipelines moving across and around a country highlights concentrations of power, money, and influence linked to resource extraction. Such a map would show, too, spaces and sites of danger to human communities and ecosystems. According to Natural Resources Canada, "between 2009 and 2013, 99.999 percent of the crude oil and petroleum products transported by Canada's federally regulated pipelines arrived safely, and during the past three years (2011–2013), 100 percent of the liquids released by these pipelines were completely recovered."[15] Impressive enough numbers, yet the latter figure suggests something more ominous about the former figure than we are intended to garner. Given the size of Canada's pipeline system, a fail rate of 0.001 percent constitutes 825 km (513 miles) of pipeline problems—about the highway distance between Toronto and Québec City (or Toronto and Chicago), and sure to include waterways and threatened ecosystems. Their increasing visibility when they fail—and as the pipeline system ages, it has come to fail more and more—has drawn attention to the scale of their presence. The possibility that any aspect of the pipeline system might fail at any given time has transformed the entire system into a looming threat. In recent years, the pipeline system's importance or necessity for modern societies has been questioned as it has emerged into sight—an inversion of the desired function of its hiddenness that is key to understanding the reanimated politics surrounding pipelines.

Barney has noted that pipelines have to be read as "media in, with and through which we come to be in the world as the sort of beings we are."[16] It is through such media that social reality is designed, built, and organized. As surely as other forms of media, pipelines generate meaning through their very material existence, but also act as conduits of symbolic meaning making:

> State approval and regulatory processes for pipeline developments are media for the production and circulation of contested scientific, technical, economic, and political knowledges about what pipelines are, what they do, and what they mean. Studies are made, presented, contested, and archived. There are blooms of data and information. Discourses are mobilized, claims are made, and languages

are translated. State and corporate public relations machines are swung into high gear. There are demonstrations, occupations, and protests. Moving and still images, graphics, text, voice, and sound proliferate via a similarly diverse array of media that together comprise a network of which the pipeline-to-come forms the trunk. Almost none of this activity would be possible without petroleum and the pipelines that communicate between its source and many destinations.[17]

The characteristic invisibility of pipelines has long served an ideological function. The surfeit of symbols that Barney names points directly to the use of resources for the benefit of capital and the garnering of massive profits through the application of technology to property. For industry, demonstrations, occupations, and protests are thus to be kept in abeyance; to be maximized are the profits that flow into bank accounts as surely as oil flows through pipelines, and to this end these media function best if made invisible.[18]

Pipelines have from their origin been systems of power and money. In his nuanced and compelling account of the history of the development of pipelines in the United States, Christopher Jones notes that "pipelines were not simply a mechanism for moving oil; they were an explicit attempt to transform who controlled the flows of petroleum and who would profit from them."[19] One of the primary reasons for the dominance of John D. Rockefeller's Standard Oil Company in the early decades of the US oil industry was the preferential rates he had established with railroads for shipping oil from the hinterlands, where it was extracted, to refineries on the US east coast. Pipelines emerged as a device through which a new oil company—Tide Water—was able to circumvent Rockefeller's control of the railroads, and so move its oil at more competitive (even cheaper) rates than could be managed by Standard. From the very beginning, the need for pipelines to traverse large territories was one of their major limitations. Rockefeller tried to impede Tide Water's attempts at creating pipelines by buying up property that lay in their path and by working to block them from crossing railroad lines. Even given the many obstacles generated by Standard, Tide Water inaugurated the world's first long-distance oil

pipeline in 1879; by 1884, more than three-quarters of crude oil distribution had shifted from rail to pipelines.[20] The consequence of the mass introduction of pipelines was significant. By reducing costs, the creation of pipelines intensified the consumption of oil. In its early years, oil was used primarily for lighting. However, the low cost of shipping it via pipeline created new markets for the use of oil for heat and power. The rapid adoption of oil as the primary energy source for an expanding modernity—an expansion it helped fuel—solidified oil as the key resource for the operations of capitalism, and a resource that generated an enormous return on profits even when the price of oil was (relatively speaking) low.

Pipelines have acted as mechanisms of power in at least two other ways. First, according to Timothy Mitchell "oil pipelines were invented as a means of reducing the ability of humans to interrupt the flow of energy."[21] In Mitchell's account, the shift from coal to oil interrupted and dislocated a form of political protest that had developed alongside the rise of coal production. The ability of coal miners to effectively and immediately disrupt energy flow through mass strikes or sabotage gave their political demands special force and led to major gains for workers between the 1880s and the interwar decades, while also supporting the development of workers' consciousness of their social circumstances. All that was required for political action was for workers to block the railroads through which coal made its way from extraction sites to communities and cities that had grown dependent on the fuel. "Unlike the movement of coal," Mitchell reminds us, "the flow of oil could not be readily assembled into a machine that enabled large numbers of people to exercise novel forms of political power."[22] Second, pipelines are a dissociative mechanism that frames labor in relationship to fuel in a distinct way. Compared to the extraction of coal, oil requires far fewer laborers per unit of energy, and pipelines ensure that the fuel extracted is used at a distance from the origin site.[23] This dissociation of extraction from consumption has implications for the environment as well as for labor. Jones points out that from the very beginning of the establishment of the pipeline system, "the users of oil gained the benefit of cheap energy without assuming responsibility for its environmental damage."[24]

Over the twentieth century, pipelines generated further socio-political and environmental dissociations as they shifted from identifiable mechanisms of power and control (over which there might be struggle) to a rationalized, techno-scientific process of resource production (over which there isn't struggle). In her account of the construction of the Trans-Arabian Pipeline, Rania Ghosn emphasizes the way in which the erasure of geography by pipelines "abstracts technological systems—their materialities, dimensions and territorialities. It removes from representation the territorial transformations along the conduit, which the inscription of the infrastructure produces, and overlooks the politics of consensus or dissensus necessary to distribute resources."[25] In this, the pipeline followed the path taken by scientific processes in general over the course of modernity: technology as *Gestell*, an enframing of the world in which nature becomes a "standing reserve" that underwrites the deadened quest of capital to fuel its own drama (Heidegger).[26] As a technological process, a standard tool used by industry scientists, and a practice taught uniformly at engineering schools across the world, pipelines have become a prime example of what Keller Easterling has named "extrastatecraft." "Contemporary infrastructure space is the secret weapon of the most powerful people in the world precisely because it orchestrates activities that can remain unstated but are nevertheless consequential," Easterling writes. "Some of the most radical changes to the globalizing world are being written, not in the language of law and diplomacy, but in these spatial, infrastructural technologies—often because market promotions or prevailing political ideologies lubricate their movement through the world."[27] For Easterling, contemporary infrastructure—and by this she means everything from free trade zones to broadband media protocols to ISO global management standards—has an agency, capacity, or disposition through which it exerts power, both separate from and in partnership with the actions of states. She is especially interested in the ways that infrastructure has been shaped to enable and support neoliberal capitalism. In short, extrastatecraft is neoliberalism carried out or enacted by the infrastructures of modernity. The power of extrastatecraft lies precisely in the fact that infrastructures tend to be seen as neutral, rational, and technical solutions to modern problems, and so are seen,

too, as devoid of political interest or impact. To the physical invisibility of pipelines, we can add what we might describe as their "political invisibility." That is, pipelines function as actants that enable capitalism both through their operation and their technological rationality, which has redoubled their givenness as a system that we (supposedly) need and (supposedly) can't live without.[28]

What is remarkable about the current public character of the discussion over pipelines in Canada is not that they have become more physically visible (even at sites of protest such as Standing Rock, the actual physical apparatus of the pipeline remains hidden), but more *politically* so. As a result of the debates and disputes over their necessity and rationality, the worldview contained within the technology of pipelines has been exposed and the ideologies contained within it made open to challenge. Some of this new political visibility can be explained as a consequence of the development of a more intensified environmental consciousness on the part of publics and the greater inclusion of the environment in policy-making within the operations of official state politics. The new politics of pipelines in Canada and the United States would in this sense present an example of what Jacques Rancière has described as "the distribution of the sensible"—a shift in the "very configuration of the visible and the relation of the visible to what can be said about it."[29] One could point to a range of reasons for this reconfiguration, including oil spills across the world that have gnawed at the dissociative function of pipelines, images that have now circulated for decades drawing attention to the scale of the oil sands, and, in the Canadian case, the devastating explosion in 2013 of train cars carrying oil in the center of Lac-Mégantic, Quebec, which killed 47 people and destroyed more than 30 buildings. The actual physical apparatus of pipelines might be as invisible as always, pushed off to the hinterlands and to zones of private property; and yet, the logics of their operations and the world they bring into existence are now newly available to dispute and debate.

The emergence of a new pipelines politics is linked to the operations of a *dispositif* to which we have grown so accustomed that we have forgotten their power—that of borders. Pipelines are technologies that enact forms of extrastatecraft, gliding below the surface of state

politics even while helping to sustain them. Easterling's presumption is that the technologies of extrastatecraft will always work in conjunction with statecraft, amplifying and accelerating the neoliberal logics of the latter. And for the most part, this may well be the case. The current struggle over pipelines in Canada, however, offers an example of when statecraft and extrastatecraft collide, with the result that the hidden demands and suppositions of infrastructure are revealed for what they are. Despite all of the opposition that has been mounted against it, the Keystone pipeline project linking Edmonton and Oklahoma is largely complete: three of the four segments are already done. The segment that was blocked—the XL segment—was one that crossed national borders and (at least for a time) brought infrastructure into collision with the imperatives of state. The rejection of the project by the Obama administration is an index of a shift in attitudes toward the apparent rationality of the fossil-fuel era; the turnaround approval by the Trump administration constitutes little more than a furtive last stand of an oil-powered hegemon in a world that cares less and less for the fuel and the Cold War imaginaries it powers. This isn't to suggest that governments are ready to give up on fossil-fuel extraction entirely or that an environmental ethos now pervades halls of power and governs policy-making in relation to energy and natural systems. And yet, the very public struggle over phase 4 of the Keystone project only years after the untroubled approval of phase 1, and over projects such as the Dakota Access Pipeline and other Canadian pipelines, suggests a political shift to which it is necessary to attend.[30]

The borders involved in the Canadian pipeline projects I've been discussing extend beyond national ones. In the movement of oil to port, multiple sovereignties come into play even within Canada. To begin with, the Canadian federal government is at the center of these policy discussions only because the proposed pipeline crosses provincial borders. The Canadian constitution assigns control over natural resources to provinces, *not* the federal government; of the 840,000 km (522,000 miles) of major pipelines in Canada that I noted at the beginning of this chapter, only 73,000 km (45,360 miles) are under the mandate of Natural Resources Canada and the National Energy Board. To the federal government must be added the imperatives of individual provinces, cities,

and finally, and perhaps most significantly, First Nations, who have been increasingly vocal and active about control and decision-making with respect to their territories. There are all manner of existing pipelines crossing provincial, federal, and territorial space, many of them built through the use of government expropriation of private land. Standard modes of political expropriation have been rendered ineffective in relation to the building of these pipelines, however, not only because of political difficulties in expropriating First Nations territory, but also because the varied sovereignties involved have distinct views on the environment and the function of the pipelines in relationship to environmental futures.[31]

The transition of pipelines from mechanisms of extrastatecraft to objects of statecraft has prompted a struggle over national futures in Canada—especially national-environmental futures, the two terms now indelibly linked in relation to political decision-making on any and every topic. Despite the fact that all of these pipelines are projects of individual companies that benefit their bottom lines, the importance of these pipelines for the purposes of national unity has been echoed by government leaders as much as by business executives. "Will the prime minister pick up the phone, call his friend, the mayor of Montreal and tell him to smarten up and start standing up for Canadians all across Canada?" conservative critic Candice Bergen demanded of Trudeau while the Prime Minister was in Davos in 2016.[32] The Conservative opposition leader, Rona Ambrose, has claimed those opposed to large pipeline projects are generating a crisis of unity[33]; the rhetoric of "national unity," "nation-building," and nationalism is being circulated in ways that are new to a neoliberal Canada.[34] In the language used by the Right, one of the major problems about the pipeline debate is that it politicizes what should properly be a technological, regulatory issue: the import of the pipelines is a "no brainer" (in Ambrose's words) that should be consigned to the invisible space of extrastatecraft. But even the need to make the case that pipelines should be invisible renders them newly political and available for investigation and interrogation by all those who might be impacted by them. The Harper government developed its legitimacy around the redefinition of Canada as an energy superpower. The ongoing pipeline debate in Canada might well end with

federal approval over Energy East in addition to Trans Mountain and Keystone XL, with the rationale being to keep jobs in Canada and to improve the economy. However, in the process, there will have been a very public interrogation of the terms of national unity, the function of extrastatecraft like pipelines in shaping the field of debate, and finally, of the character of the country's energy futures and environmental commitments.

C. From Extrastatecraft to Statecraft: Toward an Energy Commons?

In his analysis of the complex politics of another pipeline project—the Baku-Tblisi-Ceyhan pipeline from Azerbaijan to the Turkish coast—Andrew Barry writes:

> Theorists of radical democracy have focused on the articulation of disputes between human collectives, the identities of which are shifting and relational. But . . . they have had less to say about the importance of materials and technologies in political life and how the properties and behaviour of organic and inorganic materials—whether they are diseases, climate change, animal species, mineral resources or new technologies—themselves participate in such controversies . . . [M]aterial objects should not be thought of as the stable ground on which the instabilities generated by disputes between human actors are played out; rather, they should be understood as forming an integral element of evolving controversies.[35]

In an earlier paper called "On Energopolitics," I argued that one of the limits of states with respect to global warming is connected to the nature of state power itself.[36] It's not only that state power is delimited geographically, while global warming takes in the space of the entire planet. Rather, state power has no concept of—and no relation to—either energy or the environment. While some have argued for a deep connection of Michel Foucault's articulation of state power with the environment, his theories of the constitution of subjects and of states, and of all the systems and mechanisms involved in producing

and managing both, do not include *any* interest in natural systems and their limits.[37] Remember: Foucault's ideas on the organization of subjects and power have to be seen as analytic rather than normative accounts of power; we might want our state systems to be different than they are (i.e., to include the environment), but they haven't developed in this way, and so adding energy and the environment to the operations of power involves more than just hoping that states might attend to global warming. In her assessment of the challenge that climate change poses to our understanding of the operations of biopolitics, Hannah Knox argues that the concept of "population" that climate scientists are working with is "not a population constituted through a political project of statistical aggregation, but a rather 'empty' conceptualization of population that appears as the only available interpretation of the causes of a particular material effect."[38] The effect of this "empty population" on political action with respect to the environment is significant. If population has constituted the major site at which states configure power/knowledge and is also the principal guarantor of political authority, the "empty population" of environmental crisis constitutes "a new space of *not-knowing* with implications for the framing of practices of change governance."[39] Knox's revelation of the empty population used in environmental analysis reinforced my own conclusions in "On Energopower" about state power in relation to the environment: the fact that states are mechanisms for the organization of power and are relatively insensate to the environment and its populations means that we look in vain to them to address global warming, especially with the radical speed and at the radical scale necessitated by the problems at hand. States work only on defined populations; we have no extant political structure that speaks to the population of the planet as a whole, much less to the non-human species and objects with which we share the planet, and with whom we would need to shape a new planetary politics.[40]

The new political visibility of pipelines in Canada won't alter the constituent components of biopower. What it does do, however, is give us a better understanding of the gaps and limits of statecraft in relation to the environment, as well as a more thorough sense of the political pressures exerted by forces of extrastatecraft. Importantly, it may also

have a function in reshaping the terms of the debate about what oil is for and *whom* it is for. In "The Petroleum Common," George Caffentzis notes that while water has long been seen as a common property of communities, petroleum has always been owned, whether by magnates like Rockefeller or leaders such as Saddam Hussein. Might it be possible to imagine oil and other sources of energy as common property in the same way that we imagine water and air to be common? As something owned by Canadians *qua* Canadians (and indeed, humans *qua* humans), and not delimited by extractive rights or the vagaries of provincial boundaries established in advance of the fossil-fuel era, and certainly in advance of knowledge of its environmental consequences, which recognizes no borders? A decade ago, Caffentzis argued (too hopefully, it turns out) that a petroleum common was in fact slowly emerging, through indigenous claims to oil, the politics of social movements, and international organizations such as the United Nations. The proponents of a petroleum common, he writes, "argue that the consequences of the exploration, extraction, distribution, and consumption of petroleum are so problematic for 'humanity' that they cannot be left to the devices of private companies or nation states, but have to be managed by international organizations."[41]

The struggle over long-distance pipelines and the borders they cross has transformed a hidden aspect of the infrastructure of modernity into a space for the articulation of new demands and new desires for our energy futures; whether the product of the oil sands ever makes it to foreign markets now depends more on political struggles than on the technical prowess of forcing oil across a vast country now suddenly alert to the world that it has brought into existence. The debates over the merits of these pipelines index, perhaps, the beginning of a new political dynamic in relation to environmental futures, one in which the difficult changes that need to be made about infrastructure and power are visible as never before. This dynamic is importantly different than one might expect. A petroleum commons, such as the one imagined by Caffentzis, configures a state form appropriate to the empty population invoked in discussions of climate change. But Dipesh Chakrabarty has repeatedly cautioned us to be aware of the fact that there is a misfit between the politics of the state and the politics of the environment,

between the "globe" of globalization and the "globe" in global warming.[42] In Caffentzis' petroleum commons, the two globes are flattened into one, resolving the problem of petroleum and of climate change by imagining a bigger state to manage a bigger population without difference or distinction.

The energy future promised by the new visibility of pipelines is different from this. In a space of struggle that brings together borders and nations, the cultural and material, and the claims and demands of distinct communities, the whole apparatus of modern politics and its environmental consequences is on display and open to challenge—not to be quickly closed off, but so that we might crack open the claims that modernity has made on us and shape a commons no longer made in its image, shaped by its expectations and beholden to the fuels that have for too long powered it. As the infrastructure of oil modernity becomes ever more visible, so, too, will the violence and exclusions of the oil capitalism to which this infrastructure has given shape. And so, too, will new political forms become ever more present and possible as we move deeper into this century.

NOTES

1. Natural Resources Canada, *Pipelines Across Canada*, May 2016, para. 1, https://www.nrcan.gc.ca/energy/infrastructure/18856 (accessed August 17, 2018).
2. See Berger, *Northern Frontier, Northern Homeland* and O'Malley, *Past and Future Land*.
3. On the visibility of oil infrastructures during the 1970s energy crisis, see Wellum, "The Ambivalent Aesthetics of Oil."
4. Adrian Morrow and Shawn McCarthy, "Trump moves forward on Keystone XL," *Globe and Mail*, Jan. 25, 2017, A1, A9.
5. Shawn McCarthy, "Ottawa adds additional steps to pipeline reviews," *Globe and Mail*, January 27, 2016, https://www.theglobeandmail.com/news/politics/liberals-to-announce-new-transition-rules-for-assessing-pipelines/article28412555/ (accessed August 17, 2018).
6. Geoffrey Morgan, "National Energy Board doing 'inadequate' job of tracking whether pipelines meet approval," *Financial Post*, Jan. 26, 2016.
7. One is reminded of the impossible task set for nuclear engineers by the Finnish government in Michael Madsen's documentary film, *Into Eternity* (2010): to develop a system to ensure that no one will visit Onkalo, a storage site for radioactive waste, for at least 100,000 years.

8. Globe Editorial, "On Energy East, Trudeau has to be both referee and leader," *Globe and Mail*, Jan. 26, 2016, http://www.theglobeandmail.com/try-it-now/?articleId=28403383 (accessed August 17, 2018).

9. Globe Editorial, "Canada's greenhouse gas emissions can't be cut without a little pain," *Globe and Mail*, Feb. 4, 2016, http://www.theglobeandmail.com/try-it-now/?articleId=28560158 (accessed August 17, 2018).

10. Kyla Mandel, "Canada's Oil Exports Up 65 Per Cent Over Last Decade," *The Narwhal*, Feb. 22, 2016, https://thenarwhal.ca/canada-s-oil-exports-65-over-last-decade (accessed August 17, 2018).

11. Collis's *Once in Blockadia*, details the politics of the protests and ponders the power of poetry to unnerve the social imaginary shaped and supported by oil. See Collis, *Once in Blockadia*.

12. Geoffrey Morgan, "Burnaby calls on national energy regulator to suspend Trans Mountain pipeline review," *Vancouver Sun*, Jan. 20, 2016, http://www.vancouversun.com/news/burnaby+calls+national+energy+regulator+suspend+trans+mountain+pipeline+review/11664819/story.html (accessed August 17, 2018).

13. Justin Ling, "Canada Admits There's No Chance It'll Reach Its Climate Change Targets—Not Even Close," *Vice News Canada*, Feb. 1, 2016, https://news.vice.com/article/canada-admits-theres-no-chance-itll-reach-its-climate-change-targets-not-even-close (accessed August 17, 2018).

14. Barney, "Pipelines," in *Fueling Culture*, 269.

15. Natural Resources Canada, *Pipelines Across Canada*, para. 2, https://www.nrcan.gc.ca/energy/infrastructure/18856 (accessed August 17, 2018).

16. Barney, "Pipelines," 267.

17. Barney, "Pipelines," 268.

18. Writing from the perspective of an architect and critical geographer, Rania Ghosn generates a similar list of the multiple cultural, social, and political inscriptions of pipelines—all of which are rendered invisible by this apparatus once completed:

    The construction of such a large engineering project involved resolving labor availability, training, and expertise, as well as conditions of capital and technology. It meant deciding on the movement of local populations, on procurement of pipes and machinery, on whom to employ to construct and operate the pipeline, and how to secure it. Often operating in regions isolated from central power and unconnected to national and regional networks, the transport operation had to "develop" the frontier by deploying roads, ancillary services, and security posts. Simultaneously, the pipeline was built in public relations, in glossy brochures, colorful photos of communities and landscapes, and promises about positive impacts on people along the route. In its multiple dimensions, the fixation of the circulatory system in space produced a territory—simultaneously epistemological and material—through which international oil companies, transit and petro-states, and populations negotiated their political rationalities (Ghosn, "Territories of Oil: The Trans-Arabian Pipeline," 167–68).

19. Jones, *Routes of Power*, 124.

20. Jones, *Routes of Power*, 139.

21. Mitchell, *Carbon Democracy*, 36.

22. Mitchell, *Carbon Democracy*, 39.

23. Mitchell claims that from the 1920s "60 to 80 percent of the world oil production was exported." Mitchell, *Carbon Democracy*, 37.

24. Jones, *Routes of Power*, 143.

25. Ghosn, "Territories of Oil," 166.

26. Heidegger outlines the idea of "standing reserve" in "The Question Concerning Technology," in *The Question Concerning Technology and Other Essays*, 3–35.

27. Easterling, *Extrastatecraft*, 15.

28. Note: this is a very different idea of objects as actants than that promoted by Jane Bennett and others who want to give inanimate objects an efficacy. For Bennett, the fact that electricity, for example, can do things seemingly on its own, demands that we understand that materiality has a vitality to which we need to attend. What this vision of "vibrant matter" misses entirely is that the objects and infrastructures can be fashioned to be actants of a very particular kind—that is, to support human desires and actions, and so are even ontologically contained with the world of capital from which they emerge. See Bennett, *Vibrant Matter*.

    By "political invisibility," I do not mean to suggest that pipelines did not participate in state bureaucratic mechanisms of oversight and control. The "invisibility" I am speaking of here is to the space of political critique and contestation—that is, politics proper. I thank Arthur Mason for this point of clarification.

29. Rancière, "Comments and Responses."

30. Might this be a generational change? Perhaps; one of the reasons why the Harper government was so heavy-handed in their advocacy of Keystone XL was that they simply didn't grasp what was at issue: for them, a pipeline belongs in the space of extrastatecraft, something whose obvious structural and technological necessity meant that it didn't require the intervention of governments or necessitate political decision-making of any kind; for many others—including those who voted for the Trudeau government—extrastatecraft is a matter to which states are forced to attend, for ecological reasons if no other.

31. The 1995 decision by the Government of Canada to recognize the inherent right of First Nations to self-government (under the terms set out in Section 35 of the Constitution Act of 1982) has been one of the reasons that they have begun in recent decades to more strongly assert their rights as sovereign communities.

32. Aaron Wherry, "Accused of 'swanning' around Davos, Trudeau called to mediate Energy East," *CBC News*, Jan. 25, 2016, http://www.cbc.ca/news/politics/accused-of-swanning-around-davos-trudeau-called-to-mediate-energy-east-1.3419179 (accessed August 17, 2018).

33. John Paul Tasker, "Trudeau, Coderre meet after Tories blast Energy East comments," *CBC News*, Jan. 25, 2016, http://www.cbc.ca/news/politics/ambrose-energy-east-national-unity-crisis-1.3418664 (accessed August 17, 2018).

34. See, for instance, Steven Chase, "Trudeau's policies divide Canada, Manning asserts," *Globe and Mail*, Feb. 27, 2016, A4. The former leader of Canada's Reform Party, Preston Manning invoked national unity in relation to pipeline projects at an annual meeting of the Canadian conservative movement: "What will be the unity consequences when a supposedly national government welcomes tankers bringing in foreign oil on the east coast but wants to ban tankers on the west coast from

carrying Canadian oil to world markets?" he said in remarks critical of the lack of progress on new pipeline capacity.

35. Barry, *Material Politics*, 12.
36. Szeman, "On Energopolitics."
37. See, for example, Éric Darier, "Foucault and the Environment: An Introduction."
38. Knox, "Footprints in the City," 415.
39. Knox, "Footprints in the City," 415.
40. Dipesh Chakrabarty makes a similar point. "There is no politics that corresponds to planetary perspectives," he writes. "Humans face the emerging phenomenon of planetary warming from a default position, that is, from within the politics of the institutions that were created to deal with the 'globe' of 'globalization' with all the assumptions of 'stable' Holocene conditions built into them." See Chakrabarty, "Afterword," 168.
41. Caffentzis, "The Petroleum Commons."
42. Chakrabarty, "Afterword" and "The Politics of Climate Change Is More Than the Politics of Capitalism."