

Petrocultures : oil, energy, and culture

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Who We Are and What We Do: Canada as a Pipeline Nation

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“We should take pride in who we are and what we do.” So said the Honourable Jim Prentice, former Conservative minister of the environment and then–vice president of the Canadian banking and financial services conglomerate CIBC, speaking at a June 2012 meeting of the Business Council of British Columbia.¹ The remark implicitly rebuked people opposed to a number of pipeline projects linked to the ongoing exploitation of Alberta’s oil sands. In Prentice’s view, such people labour under a false and counterproductive impression of who Canadians are and what it is that we do: “We extract resources from our abundant natural deposits and rely on the proceeds of those sales to help provide an exceptional standard of living ... We’re blessed in every sense to profit as much as we do.” That is what we do and thus (though Prentice makes for a curious Marxist) that is who we are.² One can hardly imagine a more precise statement of the material and existential substance of Canadian national identity, at least as it has been conjured, reproduced, and internalized over two centuries of the staples economy in British North America.³ No matter that it effaces the experience of those whose ongoing dispossession has been the condition of its possibility, as well as that of newcomers who have never extracted a resource, seen proceeds, or been blessed by profits and an exceptional standard of living. This is presumably not the “we” to whom Mr Prentice refers. The statement has the virtue of soberly articulating at least one of the truths of the Canadian state. For those who get rich and those who enjoy comfort in this country, much of it can be attributed to the fact that for centuries we have been committed to systematically exploiting our disproportionate share of the global

standing-reserve.⁴ Indeed, as Mr Prentice observed, “We do it better than anyone in the world.”

Whether that is something in which to take pride is an open question. It certainly is something that has been mobilized ideologically, especially in relation to infrastructures that enable the extraction, storage, and transportation of resource commodities. Such infrastructure has been idealized not only as instrumental to the Canadian economy but, moreover, as materializing the Canadian nation. Following Benedict Anderson, it has become commonplace to describe nations as “imagined communities.”⁵ It might be more accurate to say that Canada was not so much imagined as fabricated, produced materially by means of infrastructures onto which an imaginary nation was subsequently (and repeatedly) projected. As Jonathan Vance has written in his account of twelve infrastructure projects that “shaped the nation” – including the Trans-Canada Highway; grain elevators; telephone, postal, and electrical systems; airways and airports – “infrastructure, in addition to its immense practical value, had psychological value.”⁶ That psychological value accrued to the capacity of transportation, trade, and logistical infrastructure, built to support the possibility of transnational commerce, to mediate a “national consciousness,” something which Laurentian industrial and political elites were also keen to manufacture. Making railways and highways would be what “made us Canadian.” Building bridges and tunnels was also “building a nation with a strong sense of itself.”⁷ Or, as Maurice Charland has put it in his definitive account of technological nationalism in Canada: “the popular mind, like the land, must be occupied.”⁸ Infrastructure accomplishes both. Materially, space-binding infrastructure spans far-flung territories and creates a common economic and political space supportive of commercial exchange and capital accumulation. Discursively, infrastructure provides a medium for a rhetoric of national purpose and identification that summons collective investment in large-scale technological projects presented as coinciding with the nation’s interests. This is the recipe for technological nationalism in Canada: the nation needs infrastructure to bind it physically, and massive infrastructure projects that serve the interests of capital need the imperative of national purpose in order to be considered legitimate. Infrastructure is materially and discursively performative: it constitutes in words and things the nation whose authorization

it requires to proceed smoothly. In both respects, technology – as means and end, material and ideology – constitutes the nation from and as “communication itself,” with communication understood in its richest sense, encompassing both the transportation of bodies and things and the attempted (but imperfectly accomplished) circulation of shared meaning.⁹

Pipelines do not make Vance’s list of nation-shaping infrastructure and are mentioned by Charland only in passing.¹⁰ The first natural gas pipeline in Canada was built at Trois-Rivières, Quebec, in 1853. The first oil pipeline was built at Petrolia, Ontario, in 1862. Oil and gas pipelines in Canada thus predate Confederation but did not really start to proliferate until after Imperial Oil’s #1 well at Leduc, Alberta, came in a gusher on 13 February 1947. If, as every Canadian schoolchild knows, the Canadian Pacific Railway was the infrastructural midwife to Canada’s birth as a country, then pipelines have been the material infrastructure of Canada’s unfinished rebirth as a distinctly “modern” nation.¹¹ Debates over oil and gas pipeline projects, including especially the TransCanada Pipeline built in the 1950s, and the Mackenzie Valley Pipeline, first proposed in the 1970s, approved in 2011, and still not built, represent crucial moments in the political economy of twentieth-century Canada.¹² There currently exist over 835,000 kilometres of gathering, feeder, transmission, and distribution pipelines for oil and natural gas in Canada.¹³ Laid end to end, that is over two hundred times the distance covered by the St Lawrence Seaway system, more than one hundred times the length of the Trans-Canada Highway, and twenty-two times the length of the entire National Highway System.¹⁴ Oil and gas transported by these pipelines – 5.3 trillion cubic feet of natural gas per year and three million barrels of crude oil per day, through the transmission system alone – heat the vast majority of Canadian homes and supply over two-thirds of the overall energy used in Canada, including 95 per cent of the energy used for transportation.¹⁵ Pipelines are, arguably, the most extensive and important infrastructure connecting urban Canada to the vast rural standing-reserve of resources that energizes and sustains its economy and its self-image.

Nevertheless, like the ether, pipelines are a mostly invisible infrastructure, owing to the fact that almost all of them are buried underground, running beneath farms and wilderness, permafrost and

neighbourhoods, private, crown, and Aboriginal land, and seldom register with our daily experience. In this respect, pipelines are pieces of equipment that are ready-to-hand but not present-at-hand.¹⁶ They are imperceptible devices that deliver their commodities (and power and wealth to their operators) without notice until something goes wrong – a leak, usually – and they suddenly become present, briefly demanding our attention. Even then, we mostly do not notice them. According to Alberta’s Energy Resources Conservation Board, between 1975 and 2012 there were 28,666 unintentional releases of crude oil from pipelines in that province alone, an average of two per day.¹⁷ The US Department of Transportation reports 5,613 “significant incidents” across pipeline systems in the United States between 1993 and 2012, including 367 fatalities, 1465 injuries, and nearly \$6.5 billion in property damage.¹⁸ Sometimes, large spills – such as the 2011 leak of twenty-eight thousand barrels of oil from the Rainbow Pipeline operated by Plains Midstream Canada near Little Buffalo, Alberta – garner significant public attention.¹⁹ However, the discrepancy between the regularity of failure and the sporadic nature of public concern suggests that pipeline spills, the majority of which are considered “minor” even when they are “significant,” have become mundane distractions in the attentional economy of petrocultures. Most people are probably prepared to accept the Canadian government’s repeated assertion that “Pipelines are currently the safest and most efficient method of transporting large volumes of crude oil and petroleum products over long distances.”²⁰ Pipelines are ordinary and unseen, even, for the most part, when they fail. Perhaps this is why, despite their space-binding qualities, they have rarely been invoked as one of those infrastructures onto which the national imaginary might be projected. Pipelines do not stand proudly on the horizon in the manner of prairie grain elevators, radio towers, or bridges across a great sea. Instead, they hide underground, insulated from the sort of affective attachment required to fetishize infrastructure technologies as objects of national identity.

However, the low profile of pipelines in the discourse of technological nationalism in Canada is changing, as several pipeline developments associated with the transportation of bitumen extracted from Alberta’s oil sands have recently become present to Canadian (and international) public attention as sites of political investment and contest. Moreover, the promotion of these developments by both

state and capital has raised anew the question of infrastructure as a medium of Canadian “national” interest and identity, only this time the infrastructure poised to materialize “who we are what we do” is not, for example, a network that allows us to pack up the station wagon for a cross-country road trip or to gather in front of a screen on Saturday night to watch the Habs wallop the Leafs. Nor is it even a digital communication network that will position Canada to lead the global information “revolution.”²¹ It is, instead, an infrastructure for transporting toxic black goo from a huge pit in the middle of nowhere to distant markets where it will be refined, sold, and burned, a commodity whose contribution to dangerous trends in global climate has exposed Canada’s international reputation to considerable damage.²² Moreover, the economic benefits of this infrastructure will be concentrated in a province (and unevenly distributed even there) that has historically rejected the alleged imperatives of a national interest in relation to which its elites have considered themselves misrecognized and disadvantaged.²³ If this is the new National Dream, it is an uneasy one. As Charland has observed, the strictly instrumental character of technological nationalism, devoid of “substance or commonality” beyond collective investment in technological development itself, leaves it particularly vulnerable to contradiction and incoherence.²⁴ This chapter will examine the curious, often incoherent, and contradictory politics of nationalism attached to the development of oil sands pipelines in Canada.

EXTREMELY HEAVY CRUDE

Oil sands are comprised of sand, water, clay, and bitumen, a viscous form of crude oil that is often described as “extremely heavy” (as opposed to “light” and “sweet”). The extremely heavy crude that saturates oil sands is categorized as “unconventional” because, unlike conventional oil deposits, bitumen cannot simply be pumped from the ground and transported to a refinery by container or pipeline. Before it can be transported, bitumen must be separated from the compound of sand, water, and clay that is its medium. There are two primary methods for extracting bitumen from oil sand deposits.²⁵ The first is surface mining, whereby shallow deposits are mined, crushed, and diluted with hot water to create a slurry whose bituminous froth is then skimmed for further processing and transport.

The second is so-called in situ extraction, whereby horizontal wells are drilled into deposits deeper than 75 metres below the surface. In a process known as steam-assisted gravity drainage (SAGD), high-pressure steam is pumped into an upper wellbore to heat the bitumen, causing it to lose viscosity and seep down into a lower wellbore from which it is pumped out. It is estimated that 80 per cent of Alberta's oil sands deposits are recoverable by in situ methods, with the remaining 20 per cent recoverable by surface mining.²⁶ It takes an average of two tonnes of mined oil sands to produce one barrel of synthetic crude oil.²⁷ Once extracted, in order to flow through a pipeline, bitumen must be diluted to reduce its viscosity, typically with natural gas condensate. It is for this reason that pipelines for transporting diluted bitumen, or "dilbit," to ports or refineries are typically accompanied by companion pipelines transporting condensate from those ports or refineries back to the site of extraction and upgrading.²⁸

The magnitude of the resource contained in the oil sands of Alberta is truly impressive. Oil sands – first discovered near Wainwright, Alberta, in 1923 and first mined at the Great Canadian Oil Sands site in 1967 – lie beneath 140,200 square kilometres of territory in the Athabasca, Cold Lake, and Peace River regions of northern Alberta, representing an estimated 1.84 trillion barrels of crude bitumen. Of this, 168.7 billion barrels (9 per cent) are recoverable using current technology and are thus counted as "proven reserves." Added to Alberta's comparatively meagre 1.5 billion barrels of conventional crude reserves, this represents 98 per cent of Canada's oil reserves and ranks Alberta (and Canada) third in terms of proven reserves globally, behind Saudi Arabia and Venezuela and ahead of Iran, Iraq, and Kuwait. In 2014, Alberta produced about 2.3 million barrels of bitumen per day, with a projected increase to 3.7 million barrels per day by 2021. In 2016, there were 131 oil sands extraction projects operating in Alberta.²⁹ The economic activity associated with the oil sands yields numbers of a similar scale. In 2013, capital spending on oil sands mining, in situ extraction, and upgrading reached \$32.7 billion. Industry revenues in 2014 reached nearly \$66.5 billion, with royalties to the province of Alberta totalling \$5.2 billion.³⁰ The Government of Alberta estimates that 133,000 people were employed in the province's upstream energy sector and that the sector accounts for roughly 36 per cent of the province's gross domestic product.³¹

According to the Canadian Association of Petroleum Producers (CAPP), oil sands contributed to 478,000 direct, indirect, or induced jobs in the oil and gas industry in Canada in 2015.³² In this respect, the future would appear to be bright, despite a recent downturn in global oil prices and the pressure this has placed on the Alberta economy. The International Energy Agency predicts that global demand for oil will increase by 14 per cent by 2040 from 2014 levels, representing over 25 per cent of world energy demands.³³ Meanwhile, CAPP forecasts that production of oil sands bitumen will exceed five million barrels per day by 2030.³⁴

As I will discuss below, the “facts” concerning the projected economic and employment benefits of oil sands development are highly contested and therefore difficult to discern. The investments required to extract bitumen from the oil sands and deliver it to market are extensive and risky, especially as Alberta crude faces pressure from other sources of unconventional oil, such as the Bakken Shale fields of North Dakota.³⁵ Still, the oil sands are generally thought to represent a resource with great potential to deliver massive rents, well into the future, to those who are positioned to exploit them.³⁶ For this to happen, among myriad other considerations at play in the profitable production and marketing of oil sands crude, one fact stands as indisputable: once extracted, the bitumen must move. Diluted bitumen can travel over land by tanker truck, rail, and pipeline. From the point of view of oil sands producers, pipelines are the most economical, efficient, and secure means of transporting bitumen, and a deficit of pipeline capacity relative to available supply has been cited as the source of foregone revenues in the order of \$15 billion per year.³⁷ The attribution of lost revenue to limited pipeline capacity has been disputed – critics argue that price differentials applied to bitumen arise from the higher costs of refining it, not backups behind full pipelines – but the fact that industry advocates would resort to such an alarmist argument signals the depth of their desire to accelerate exploitation of this resource by building more pipelines to carry it.³⁸ As oil and gas economist Andrew Potter has put it, “Pipeline capacity out of western Canada is adequate for the short term, but substantial progress must be made on this front ... Canada needs pipe – and lots of it – to avoid the opportunity cost of stranding over a million barrels a day of potential crude oil growth.”³⁹

Not everyone agrees that Canada needs pipe, or that an additional million barrels a day of extremely heavy crude drawn from the oil sands is an opportunity too good to pass up. The oil sands have provoked sustained criticism and active opposition both within Alberta and without, most of it motivated by concerns about their environmental impact.⁴⁰ Bitumen extraction consumes a massive volume of freshwater. The Pembina Institute, an environmental think tank with headquarters in Alberta, reports that oil sands extraction consumed roughly 1.1 billion barrels of freshwater in 2011 and projects 4.8 million barrels (the equivalent of 309 Olympic-size swimming pools) per day by 2022, nearly all of it drawn from the Athabasca River.⁴¹ Extracting bitumen also burns great quantities of fossil fuels – whether coal-fired electricity or diesel fuel for surface mining machines and vehicles, or natural gas to make heat and steam for in situ SAGD – and is estimated to produce greenhouse gas emissions at a rate three to four times higher than that of conventional oil production in North America. This makes the oil sands “the fastest growing source of climate change pollution in Canada.”⁴² Also, the residual waste produced by surface mining is stored in tailings ponds whose unstable containment risks fouling nearby ecosystems. In 2010, the total volume of oil sands tailings held in Alberta “ponds” was 830 million cubic metres, a number projected to increase dramatically if currently approved oil sands projects are pursued.⁴³ These characteristics of bitumen extraction, together with the view that production of this resource is likely to increase global dependence on fossil fuels and undermine efforts to arrest petroleum consumption, greenhouse gas emissions, and global warming, have led to characterization of bitumen as “dirty oil” and have spawned a transnational environmental movement determined to prevent its harvest.⁴⁴

Along with opposing oil sands development directly, actors involved in this movement have targeted pipelines as the necessary infrastructure for transporting the commodity to market. In this view, if the bitumen cannot move, it cannot be a commodity and its exploitation will cease to be economically attractive.⁴⁵ A wide variety of actors have also contested the development of pipeline infrastructure itself. Pipelines (and the tanker vessels connected to them) traverse wilderness, wildlife migration routes, aquifers, wetlands and watercourses, marine ecosystems, urban and rural communities,

agricultural lands, and Aboriginal territories. Their construction is disruptive of these and, once built and operating, they sometimes leak or explode.⁴⁶ Additionally, economic benefits derived from pipelines and the commodities they transport are unevenly distributed among their operators and the local stakeholders who are disproportionately exposed to their risks. In North America, new pipelines require approval by government agencies mandated to consider the public interest – including environmental protection – in their development, which provides a high-profile and consequential venue for activists and stakeholders to contest their construction. In considering applications for proposed pipelines, Canada’s National Energy Board (NEB) is mandated to consider, along with various technical and economic factors, “any public interest that in the Board’s opinion may be affected by the issuance of the certificate or the dismissal of the application.”⁴⁷ In recent years, consideration of the public interest in the environmental impacts of pipelines has been carried out by Joint Review Panels charged by the NEB and the federal Ministry of the Environment with reporting on these impacts, a process that involves public submissions and hearings, often in the communities that are to be directly affected by the proposed development.⁴⁸ Accordingly, proposed oil sands pipelines have become a flashpoint for political opposition, notwithstanding the considerable riches they promise to yield. It is in this context – contention over the benefits and harms of developing the oil sands and their related infrastructure, and the threat this poses to the interests of state and capital in exploiting this resource – that pipelines have emerged as the latest medium of technological nationalism in Canada.

THE BEST NEWS OF ALL

In an earlier version of the speech in which he characterized the exploitation of natural resources as “who we are and what we do,” former cabinet minister Jim Prentice described proposed oil sands pipelines and several other energy projects as “nation-building infrastructure,” asserting that “the build-out of Canada’s energy infrastructure could be the main driver of our economic growth.” He went on to specify that “With our enormous untapped resource wealth, Canada stands uniquely positioned to achieve economic growth and job creation while securing new markets for our resources. And the

best news of all is that all this development can be led by the private sector.” Thus, Prentice concluded, “the era of nation-building is far from over,” adding that “Nation-building is always a bet on the future. It requires courage, commitment and vision, tempered by a clear-eyed assessment of how the future will unfold.”⁴⁹

According to the Government of Alberta, “Only 13 percent of the world’s oil is accessible to private investment – the rest is controlled by national governments. Of this accessible oil, 51 percent is found in Alberta’s oil sands.”⁵⁰ This – the availability of a gigantic collective resource for private appropriation – is what Mr Prentice refers to as “the best news of all.” It might seem contradictory that a project cast as “nation-building” would define itself in opposition to national, public control of a key resource and, instead, celebrate its exploitation by relatively few private (and, in many cases, foreign) corporations in their own interests, but this construction is consistent with the formula for technological nationalism. The primary concern of technological nationalism is to represent the particular, private interest of the (increasingly transnational) capitalist class in developing commodity infrastructure as the general, collective interest of the nation. In this process, the concrete interests of capital are abstracted and projected onto the body of the nation as whole, whose interests are reduced to those of something called “the economy.” Actual corporations and the actual people who control them to extract actual wealth give way to abstract categories of economic growth and job “creation,” defined by statistically aggregated “person-years” of employment whose correspondence to real jobs that real workers might have or keep is tenuous at best. Typically, this appeal to economic interest is augmented by an association of productivity, innovation, and growth with loftier ideals of national independence and sovereignty, and by a cultivated fear of their loss. In the Canadian context, this has often produced a shared commitment to develop technological infrastructures deemed necessary to advance these ideals and secure the interests for which they stand.⁵¹ In this way, collective investment in what is presented as the national interest – for example, pipelines – becomes an urgent moral imperative shared by all, one that cannot withstand timidity or doubt, but instead calls upon heroic qualities with which we long to be identified, qualities such as “courage, commitment and vision.”⁵²

It is something like this investment, and these qualities, that former prime minister Stephen Harper attempted to summon in raising the prospect of Canada's future as a "global energy superpower."⁵³ Speaking in London in 2006, Harper described Canada's impressive performance in the areas of hydroelectricity, natural gas, and uranium production, but minimized these as "only the beginning" in light of the discovery that an "ocean of oil-soaked sand lies under the muskeg of northern Alberta." He went on to characterize the task of exploiting the oil sands as "an enterprise of epic proportions, akin to the building of the pyramids or China's Great Wall. Only bigger." The enterprise of building the pyramids left behind the pyramids, while that of the Great Wall left the Great Wall. That Harper invoked these enduring global treasures as comparable to (but lesser than) a project whose chief legacy will be a great scar upon the landscape, thousands of kilometres of buried pipelines, scores of potentially toxic tailings ponds, continued rise in global temperatures, and the fattened accounts of a handful of transnational energy industrialists, speaks volumes about the perceived need to cultivate nationalist affect in relation to this infrastructure. The same goes for the former prime minister's characterization of the technology required to process bitumen as "Brobdingnagian," by which he meant to signal the gigantic opportunity for profitable foreign investment represented by the oil sands. It bears noting that Brobdingnag, the mythical land of giants in Jonathan Swift's *Gulliver's Travels*, is an imaginary country, much like the one that must be conjured to accomplish an identification of Canada's national interest with that of the global energy industry and those who profit from it.

In this imaginary country, jobs spring from the ground in great numbers and seem to go on forever, and the public coffers are always full of revenues generated by taxes and resource royalties. Cultivating a perception that the economic benefits of oil sands development will be socialized in the form of jobs for working class Canadians and revenue support for public services has been crucial to the effort to frame the project as a national imperative. A key document in this effort has been a report projecting economic impacts of oil sands development up to 2035, published in 2011 by the Canadian Energy Research Institute (CERI). CERI is funded by Natural Resources Canada, Alberta Energy, and the Canadian Association of Petroleum Producers, but describes itself as "an

independent, not-for-profit research environment,” dedicated to providing “independent and objective research.”⁵⁴ The CERI report, which has been cited widely by private- and public-sector supporters of oil sands development, estimated that new oil sands projects would have a GDP impact for Canada of \$2.1 trillion by 2035, including 905,000 jobs. The Canadian government’s share of tax revenues over the same period was estimated at \$311 billion; the Alberta government’s total revenue was projected to be \$455 billion (\$105 billion in taxes plus \$350 billion in royalties). When added to existing oil sands projects, the cumulative total of royalties projected for the province of Alberta over the next twenty-five years is presented as exceeding \$623 billion.⁵⁵

Numbers such as this made it seem self-evident that the oil sands are so central to Canada’s economic prosperity and standard of living that their development, including construction of the infrastructure required to transport bitumen to market, is a unifying national purpose of historic proportions. However, it bears noting that the economic benefits projected by CERI were concentrated heavily in the province of Alberta, even after federal tax revenue is taken into account. According to the CERI report, 94 per cent of the projected GDP impact of new oil sands projects over the next twenty-five years will occur in Alberta, with only 6 per cent occurring in the rest of Canada. In terms of employment gains, 85 per cent will be realized in Alberta.⁵⁶ Thus, manufacturing national legitimacy for oil sands pipelines requires a two-pronged ideological operation: first, the economic interests of the energy industry must be socialized in the form of the promise of jobs and public revenues; and, second, the interests of the country as a whole must be identified with those of the province of Alberta (or at least that portion of it that benefits from the energy industry).⁵⁷ Alberta Energy has declared that “Alberta’s oil sands reserves are enough to meet Canada’s current oil demand for almost 400 years,” but no one seriously suggests that this, rather than export aimed at maximizing profit in the short term, is how the resource will actually be used.⁵⁸ For the most part, proposed oil sands pipelines such as the Keystone XL, Northern Gateway, and Energy East are for transporting bitumen out of the country as fast as possible, not husbanding the resource for domestic use. There is also little hope that Canadians will see reduced fuel prices as a result of oil sands development. If additional pipeline

capacity reduces the market differential attached to extremely heavy crude (as pipeline advocates routinely insist it will), the price of bitumen will rise closer to global crude benchmarks, increasing industry revenues but exerting no downward pressure on gasoline prices in Canada.⁵⁹ Concerns about domestic energy supply and prices at the pump might be more populist than critical, but they do point to the difficulty proponents face in constructing pipelines as “national” infrastructure.

Industry commentators consistently remark that “few people would dispute that the oil sands benefit Canada economically.”⁶⁰ This suggests that while there might be reason to oppose oil sands development and pipeline projects on environmental or political grounds, the case for their economic benefit to Canada is closed. However, as with any consensus, this obscures a more contested field than such claims indicate. A recent report prepared for the Polaris Institute and the Canadian Centre for Policy Alternatives (PI/CCPA) casts doubt on the presumption that oil sands development is unambiguously in the national economic interest.⁶¹ The report describes oil sands development as the latest iteration of what Harold Innis famously labelled the “staples trap,” whereby production of staple commodities for large-scale export requires massive up-front (often foreign) capital investment in production and transportation infrastructure, which subsequently creates pressure to develop and export the unprocessed resource quickly and in great volumes, rather than wait for secondary processing capacity to be developed. Canada is then left to import value-added goods manufactured using the very staple it has exported. According to the PI/CCPA report, Canada’s bitumen industry exhibits “all the classic features of a staples economy ... including heavy investment in production and transportation infrastructure, growing reliance on foreign capital, disproportionate political influence of staples-producing corporations, and growing regional inequality.”⁶² The report estimates that foreign direct investment (FDI) in the energy sector has expanded by \$135 billion over the past decade, “likely the biggest sustained inward surge in FDI in Canadian history.”⁶³ As a result, “over one-third of the assets and more than half of the operating revenues in the Canadian petroleum sector are associated with foreign-controlled firms.”⁶⁴ Countries with relatively small domestic capital reserves such as Canada require foreign investment for

large-scale economic development, but investors expect that profits will be portable across Canada's borders, and levels of FDI such as this, concentrated in a single sector over a short period of time, raise the question of whether the economic interests served by oil sands development can really be described as primarily "national."

It is also far from clear that the economic benefits of oil sands projects will be effectively socialized in the form of public revenues and working class jobs. For example, expected tax revenues from oil sands activity are mitigated by the various tax incentives federal and provincial governments have put in place to attract investment and development in the sector in the first place.⁶⁵ Similarly, when projected royalty revenues are measured in relation to the real value of the resource, all of which belongs constitutionally to the citizens of the provinces in which it is located, the promise of public coffers enriched by oil revenues seems a much poorer bargain than the bonanza promoted by proponents. As Diana Gibson has observed, royalty schedules necessarily fall far short of the return that could be generated by a publicly owned corporation with preferred access to the resource and dedicated to developing it in the public interest. "Public ownership is the best way to capture royalties," Gibson argues, "as 100 percent goes to the owners, the people of Alberta."⁶⁶ She points out that the vast majority of the top twenty oil and gas companies in the world are publicly owned corporations, including several that operate in the Alberta oil sands. "It is ironic," Gibson writes, "that the citizens of Norway, China, Korea, Japan and Abu Dhabi are profiting from Alberta's oil and gas while Albertans do not publicly own any of the companies involved."⁶⁷ It is not just that Alberta has foregone the revenue that could arise from public ownership of oil sands enterprises but also that, "Alberta is currently the lowest tax and royalty jurisdiction in North America and one of the lowest in the world."⁶⁸ As a report prepared for the University of Alberta's Parkland Institute describes, "virtually royalty-free bitumen" has become the means by which Alberta effectively reimburses the capital and operating costs incurred by the energy industry in developing and exploiting the resource.⁶⁹ The report documents that, between 1986 and 2012, more than \$285 billion worth of bitumen and synthetic crude was produced in the oil sands. Over this period, Alberta's public revenue from royalties and land transfer taxes related to oil sands production totalled \$25 billion, representing

just 6 per cent of the total value of the resource extracted. In contrast, pre-tax profits flowing to oil sands companies over this period reached \$260 billion, exceeding the public take more than tenfold.⁷⁰ As the author of the report observes, the disproportional distribution of the benefits of the bitumen industry is ironic given the similarly disproportionate burden the public has borne in facilitating the development of the resource: “for such a small slice of the pie, it was the public who, over decades, paid for the bulk of the research necessary to make the tar sands industry possible, including developing the technologies at the centre of mining and *in-situ* extraction.”⁷¹ The 2015 Alberta provincial election installed a New Democratic Party government under Rachel Notley, who had previously criticized the province’s oil and gas royalty schedule for failing to deliver a fair share to citizens. Constrained by depressed global oil prices, the government’s much-anticipated revision of the provincial royalty regime did not materially alter the situation, instead “holding the line on oil sands royalties under an industry-friendly policy” that included cuts to existing royalty rates.⁷²

What about jobs? As described in the PI/CCPA report cited above, “Petroleum extraction is a uniquely capital-intensive undertaking, which implies that an unusually small number of jobs are created by the expansion of this industry.”⁷³ Drawing on Statistics Canada data, the report shows that, among the nineteen major sectors of the Canadian economy, the oil and gas industry ranks second from last in terms of overall employment and last in terms of employment intensity, or jobs per \$1 million contribution to GDP. To take but one comparative example, while the oil and gas industry employed 56,283 people in 2011, with an intensity of 0.48 jobs per \$1 million contribution to GDP, the arts and entertainment sector employed 241,916 people, with an intensity of 17.71 jobs per \$1 million of GDP, suggesting that, as far as job creation is concerned, film studies, musical education, creative writing, and sound engineering might be far better investments than oil sands development.⁷⁴ Most projections of oil sands-related employment, especially those for proposed pipeline projects, are careful to include “indirect” and “induced” jobs in other sectors in their calculations.⁷⁵ Industry-friendly projections also typically include both jobs created and jobs “preserved” by oil sands development, the latter being a much more ambiguous and inflationary category.

Much depends on what counts as a job. Projections such as those used in the CERI report and in pipeline proponents' applications to the NEB use the unit of "person-years" as equivalent to a job.⁷⁶ That means a person hired to work on a pipeline, or for a company that services a pipeline project, or in a restaurant that serves pipeline workers, for a year or less, is counted as having a job. It also means that, should their employment extend into a second year, it counts as two jobs. Calculations such as these systematically inflate the employment projections associated with the oil sands and related pipeline projects. For example, Enbridge's assertion that its proposed Northern Gateway Pipeline will create 3,000 jobs during the construction phase and 650 permanent jobs thereafter relies wholly on the conflation of direct, indirect, and induced employment and the equation of person-years of employment with jobs. As Robyn Allan observes in her critique of the application, "Person-years of employment are not jobs. If you work for a company for five years as a carpenter or an electrician: that is a job. Enbridge would call it five ... The 650 permanent jobs come from the same document as the construction employment figures. Only 78 jobs are related to the actual project. The rest are estimates of employment from direct input purchases, indirect and induced impacts over 30 years."⁷⁷ Thus, employment projections are far from convincing as a basis upon which to claim that the economic benefits of oil sands and pipeline development will be socialized in the form of real jobs for working class Canadians. Providing well-distributed employment income is simply not what the exploitation of this resource is for. While it is true that oil sands development provides some relatively high-paying jobs, relative to the surplus-value and capital returns generated by these projects, "it is not at all clear that workers in the petroleum industry (and in petroleum producing provinces) have been capturing a fair share of the wealth they produce in the form of wages, salaries, and benefits. Indeed, labour incomes paid in the petroleum industry are uniquely low as a share of the industry's total output ... a booming petroleum industry provides no guarantee whatsoever of healthy labour incomes."⁷⁸ In Alberta, the province where the economic benefits of the oil sands boom are heavily concentrated, the top 1 per cent of income earners are "by far the wealthiest in the nation, while at the bottom Alberta has the most intense poverty," disparities that are growing wider, not narrower,

as oil sands development accelerates.⁷⁹ Apparently, pipelines are not just devices for transporting oil, or even for socializing the economic benefits of the oil sands. They are also technologies that manufacture and intensify the inequalities that are a structural characteristic of petroleum economies everywhere.⁸⁰ This, it would seem, is who we are and what we do.

At a minimum, the proposition that oil sands and pipeline development are imperative to economic interests that are self-evidently “national” is highly contestable. If anything about these projects is being socialized and borne by the country as a whole, it is the externalities and costs of these developments, in the form of other public goods that have been foregone or sacrificed to facilitate accelerated expansion of bitumen production and transportation. As a report published by Ontario’s Mowat Centre puts it, “for over three decades, the Alberta government and the oil sector have very strongly said that they expect to reap all the economic benefits of oil sands development but that others will have to deal with the environmental risks.”⁸¹ In addition to the local, national, and global environmental implications of oil sands and pipeline development, it is also the case that pursuit of these projects has brought with it a systematic dismantling of the public apparatus by which collective interest in these matters might be established and protected. The omnibus legislation passed to implement the Canadian government’s 2012 budget (Bill C-38) was emblematic in this regard.⁸² The overriding priority of the legislation was to create the conditions for accelerated exploitation of the oil sands, including expedited approval of related pipeline projects. Justified in terms of the “historic opportunity” for prosperity presented by the oil sands, Bill C-38 included several changes to Canada’s immigration and unemployment insurance systems to facilitate the supply of skilled labour for the energy sector. It also repealed and amended multiple pieces of legislation that had previously mandated environmental review and regulation of various activities related to environmental impacts of oil sands and pipelines projects.⁸³ At the same time, the government also shut down several arm’s-length agencies active in environmental monitoring, including the National Roundtable on the Environment and the Economy and the First Nations Statistical Institute, and enhanced cabinet authority over NEB decisions on pipeline approvals and environmental assessments.⁸⁴ Speaking to these measures, then-minister of natural

resources Joe Oliver reportedly said, “it is more important for the government, rather than regulators, to make final decisions on projects of national importance.”⁸⁵ Bill C-38 also made changes to the Income Tax Act aimed at restricting the ability of charitable environmental organizations to engage in public interest advocacy, and earmarked \$8 million to assist the Canada Revenue Agency to “target registered charities that the government believes are too overtly political.”⁸⁶ About a year later, the NEB announced new rules concerning who would be permitted to make written or oral submissions concerning proposed pipeline projects. While both “indirect” and “induced” employment are counted as jobs for the purpose of constructing the national interest in pipeline development, participation in the NEB’s public hearings on pipeline applications would be limited to those who were deemed to be “directly” affected by the proposal, or to have “relevant” expertise, and could demonstrate this in a ten-page application.⁸⁷ Taken together, these measures meant that, in addition to dismantling public institutions charged with the authority to protect the environment against the harmful impacts of the energy industry, the public sphere in which these impacts might be exposed to democratic consideration was intentionally eroded by the Harper government. Soon after its election in 2015, the Liberal government led by Justin Trudeau added additional consultation requirements to the NEB process for existing pipeline proposals, and in 2016 announced the establishment of expert panels to review the Canadian Environmental Assessment Act and the National Energy Board mandate and procedures, including public consultations.⁸⁸

WE, THE PIPELINE ...

Whether the Trudeau Liberal government is committed to placing environmental responsibility ahead of economic development in Canada’s resource sector remains to be seen, as does whether it will continue its predecessor’s practice of promoting the energy sector and its infrastructures using the language of national imperative and identity. In his speech tabling the 2012 budget, former finance minister Jim Flaherty justified the sweeping changes entailed in the legislation specifically in terms of a national imperative to build pipelines for the transportation of bitumen: “We will streamline the review process for such projects ... We will ensure that Canada has the infrastructure

we need to move our exports to new markets.”⁸⁹ Who, it should be asked, is included in the “we” for whom the minister purported to speak and act? In the twelve months leading up to September 2012, the period in which the legislative changes noted above were being formulated and implemented, senior figures in the energy industry – including representatives of the Canadian Association of Petroleum Producers, the Canadian Energy Pipeline Association, Suncor Energy, and Imperial Oil Limited, and pipeline companies TransCanada Corporation and Enbridge – held 791 separate meetings with federal cabinet ministers, members of Parliament, and senior officials, more than any other Canadian industry. Over the same period, cabinet ministers met with representatives of the environmental lobby only once.⁹⁰ As one commentator put it, “The Canadian energy industry has forged unrivalled access to the federal government among major industries, as key companies and their associations met frequently with politicians and senior bureaucrats in recent years to craft common messages and discuss regulatory changes.”⁹¹ Thus, it would seem clear that when the Harper government declared its intention to ensure that Canada has “the infrastructure *we* need” to transport bitumen to tidewater, the energy industry and pipeline proponents are definitely well-represented in this “we.”

Less clear is whether those who oppose these developments were similarly included. Certainly, this “we” did not include the thousands of American (and other) citizens and activists opposed to the proposed Keystone XL pipeline, slated to deliver 850,000 barrels per day across the border and through several states to Gulf Coast refineries in Texas.⁹² Against this opposition, the governments of Alberta and Canada and the pipeline industry mounted a massive public relations and lobby campaign, involving powerful lobbying firms with established ties to the Obama administration, pricey ads in Washington, DC, newspapers and airports, ambassadorial appeals, and high-profile speeches by the prime minister, the premier of Alberta, and several other senior officials at influential US policy venues.⁹³ All of this was aimed at persuading the American government of the imperative to approve the Keystone XL project, despite the massive domestic and international social movement that had arisen to oppose it.⁹⁴

Along with downplaying the environmental impacts of the pipeline, a major element of this strategy entailed portraying Canada as a

reliable, stable, secure, and even ethical source for the United States' energy needs.⁹⁵ Thus, Prime Minister Harper characterized Canada as a "stable, reliable producer in a volatile, unpredictable world."⁹⁶ Conservative minister of natural resources Joe Oliver similarly encouraged the United States to buy from a loyal ally rather than "less friendly, less stable" countries.⁹⁷ Industry promoters were even more direct: "if oil is not shipped in increasing quantities by pipeline from secure, stable Canada, the U.S. will be obliged to rely on crude oil from more volatile Middle Eastern and South American suppliers who share neither American interests nor values."⁹⁸ Aside from the subtle racism implied by this discourse, it also exposed the incoherent character of Canada's supposedly "national" interest in oil sands development. First, as noted above, Canada *as a country* actually owns and controls no enterprises in the Alberta oil sands (recall, this is "the best news of all") and Canadian corporations own and operate only some of the companies involved in extracting, selling, and transporting bitumen, the remainder being owned by enterprises from several other countries, including corporations owned by states whose "interests" and "values" sometimes differ from those of the United States. Second, even if "Canada" did own properties in the oil patch, such that it could enforce its sovereign national interest over the disposal of that resource, portraying Canada as a reliable, stable energy source for the United States suggests that – in contrast to other "unreliable" states such as Venezuela and Saudi Arabia, which have sometimes used their status as energy exporters to privilege domestic interests – "we" can be counted on never to prioritize "national" interest in a way that might conflict with the energy needs of the United States. This is undoubtedly what former cabinet minister and now-champion of "nation-building infrastructure" Jim Prentice meant when he described Canada as a "dependable" source of energy but, if this was an assertion of national interest, it was a curiously self-abnegating one.⁹⁹

Interestingly, this very argument has been mobilized by promoters of oil sands development to press the case for latitudinal pipelines oriented towards delivering bitumen to markets other than the United States. Describing himself as a "Canadian nationalist," Rick George, the former CEO of Suncor Energy, pointed out that: "It is not inconceivable to imagine the United States insisting that Canada alter various standards to match its own. Why would we let another

country dictate environmental policy and commercial terms to us? That's what happens where energy is concerned, and it's a breach of Canadian sovereignty when it occurs."

It bears noting that executives such as Mr George have become extremely wealthy letting the United States dictate environmental policy and commercial terms to them.¹⁰⁰ Nonetheless, national sovereignty was readily invoked to support approval and construction of the Enbridge Northern Gateway Pipeline, slated to deliver 525,000 barrels per day from Bruderheim, Alberta, to tidewater at Kitimat, BC, and the Kinder Morgan Trans Mountain Pipeline expansion, slated to transport 529,000 barrels daily from Edmonton, Alberta, to a terminal on Burrard Inlet in Burnaby, BC. Both of these are intended to facilitate the sale of bitumen to lucrative markets in Asia, a purpose whose importance to the national interest has been deemed by the federal government to be non-negotiable. Speaking specifically of the need to gain access to Asian markets for oil sands crude, former Conservative foreign affairs minister John Baird expressed the matter succinctly: "It's simply not a choice; it's not an option. It has to be a national imperative."¹⁰¹ Former natural resources minister Joe Oliver went even further, declaring that, "Gateway, in our opinion, is in the national interest," a highly unusual intervention given that the pipeline proposal was before the NEB at the time.¹⁰² In December 2013, the NEB recommended approval of the Enbridge Northern Gateway Pipeline proposal, satisfied that it was "required by the present and future public convenience and necessity," subject to a set of conditions the proponent appeared well-disposed to meet.¹⁰³ Shortly before the deadline for the government's final decision on the NEB recommendation, a consortium of Canadian political and economic elites weighed in with the full force of economic and technological nationalism. On 12 June 2014, an open letter titled "Northern Gateway: A Project for Canada" appeared in several major Canadian daily newspapers, signed by a high-profile group (whose ties to the energy and financial sectors were not disclosed) of forty former federal cabinet ministers, former and sitting provincial premiers, and several representatives of the business community, including the presidents of the Canadian Chamber of Commerce and the Canadian Association of Petroleum Producers. The letter sets out the imperative that "Canada opens up new markets so that taxpayers get full value for our energy resources and

that our natural resources find a way to those markets as quickly as possible.”¹⁰⁴ As discussed above, prevailing financial arrangements in the oil patch guarantee that “taxpayers” will get nothing close to “full value” for their energy resources whether they are successfully marketed or not. Resolution of this contradiction inevitably devolves to the standard formula expressed in the letter’s closing lines: “Canada stands on the edge of an unprecedented opportunity – one that promises to strengthen our entire nation ... Northern Gateway is such a project and that is why we support it.”¹⁰⁵ On 17 June 2014, the federal government approved the proposal.¹⁰⁶

If the Northern Gateway and Trans Mountain Pipelines are so clearly in the national interest that choosing not to build them is “not an option,” then those who oppose or contest their approval and development cannot be included in the “we” for whom the Canadian government and political and economic elites speak when they assert a national interest in this technology. Apparently, the 130 First Nations whose leaders signed the *Save the Fraser Declaration*, in which they pledged, “We will *not allow* the proposed Enbridge Northern Gateway Pipeline, or similar Tar Sands projects, to cross our lands, territories and watershed, or the ocean migration routes of Fraser River salmon,” are not included in the nation defined by an existential need for this infrastructure.¹⁰⁷ Neither are the nine First Nations of the Central and North Pacific Coast and Haida Gwaii, whose *Coastal First Nations Declaration* pledges that “oil tankers carrying crude oil from the Alberta Tar Sands will not be allowed to transit our lands and waters.”¹⁰⁸ Nor are the three hundred scientists (the overwhelming majority of whom are Canadian) who signed an open letter to Prime Minister Harper concluding that the Joint Review Panel’s assessment of the environmental impact of the Northern Gateway Pipeline Project represents “a flawed analysis of the risks and benefits to British Columbia’s environment and society” and is “indefensible as a basis to judge in favour of the Project.”¹⁰⁹ Nor is the expansive and diverse popular movement that arose in British Columbia to oppose these pipelines on environmental grounds, and also to reject the increased and highly risky tanker traffic they will draw to ecologically sensitive and hard-to-navigate coastal waters.¹¹⁰

This was made clear in January 2012 when, in a widely published open letter, Conservative natural resources minister Joe Oliver

accused “environmental and other radical groups” of working to “hijack our regulatory system to achieve their radical ideological agenda.”¹¹¹ “Their goal,” according to Oliver, “is to stop any major project no matter what the cost to Canadian families in lost jobs and economic growth. No forestry. No mining. No oil. No gas. No more hydro-electric dams.” In other words, these are people who are confused about who we are and what we do. They are not even really Canadian. Apparently referring to environmental groups scheduled to participate in the NEB’s public hearings on the Northern Gateway Pipeline application, Oliver accused these groups of “stacking public hearings with bodies to ensure that delays kill good projects,” and alleged that “they use funding from foreign special interest groups to undermine Canada’s national economic interest.” It is interesting that the government would raise the spectre of unwanted foreign intervention in domestic affairs by well-funded radicals at precisely the moment it was itself engaging in a well-orchestrated, state-funded campaign to influence domestic decision-making in the United States on the Keystone XL Pipeline. But technological nationalism is not about consistency; it is about picking teams.¹¹² In characterizing opponents of oil sands pipelines as irrational aliens bent on undermining a national interest that, as I have argued above, can hardly be said to exist at all, the government unwittingly exposed something important about technological nationalism: if infrastructure can be used to unite Canadians in common identity and purpose, it can also be used to divide them, by separating those who are willing to commit to the collective project of delivering the country and its resources to capital, whether foreign or domestic, from those who are not.¹¹³ The former are to be mobilized, the latter are to be marginalized. In his letter, the minister concluded by indicating that the need to reform the regulatory system such that ideologically driven radicals could no longer provoke “unnecessary delays” in the approval of pipeline projects was “an urgent matter of Canada’s national interest.” In due course, the changes to the NEB process described above were implemented, whereby dissenting parties would find their opportunity to express their opposition dramatically curtailed. Shortly thereafter, documents obtained by journalists under the Access to Information Act revealed that the NEB, in consultation with the RCMP and the Canadian Security Intelligence Service had been routinely gathering “security” information on a range

of environmental and advocacy organizations known to oppose oil sands pipeline projects.¹¹⁴

In June 2016, the Federal Court of Appeal quashed the Conservative cabinet's permit for the Northern Gateway Pipeline, on the grounds that the government had failed to meet its legal obligation to consult in good faith with First Nations affected by the project.¹¹⁵ The decision confirmed that the national imperative attached to development of pipeline infrastructure had been built upon the intentional exclusion of entire categories interested citizens, including those who inhabit the lands this infrastructure would traverse. Historically, technological nationalism has posed Canada's expansive and harsh geography as the primary obstacle to be overcome in the attempt to bind the country as a nation, a task for which the building of transportation and communication infrastructure was perfectly suited. The primary purpose of these infrastructures was to facilitate industry and commerce, and thereby to serve the interests of capital, but their construction demanded exactly the sort of collective commitment and sacrifice that could be manufactured by invoking the prospect of a heroic triumph over the country's formidable expanse. In the process, a nation could be forged both materially and ideologically. The building of the Canadian Pacific Railway, for example, was accompanied by a rhetoric of shared national purpose and common striving, and has been mythologized as a collective achievement that established Canada's nationhood and materialized the state's independence. However, as Charland points out, the actual imperative that drove the project was "the circulation or communication of commodities and capital. The civilization the railroad extended was one of commerce ... If the CPR was a 'national project,' it was so first and foremost as an economic venture."¹¹⁶ The Canadian state whose sovereignty was materialized by the railroad was, first and last, "a state of capitalists."¹¹⁷ Casting geography as a common obstacle to overcome served the effort to craft an identity, not so much between east and west, French and English, Catholic and Protestant, Tory and Liberal but, rather, between the interests of capital and those of a country still becoming who and what it was.

Some things never change. Then again, some things do. These days, the obstacle faced by those seeking to build an infrastructure that will traverse the country in the interests of capital is not primarily geographical. It is political. It is true that oil sands bitumen

is situated at an inconvenient distance from the tidewater ports it must reach in order to generate value as a commodity. However, overcoming this distance technologically is really no big deal: all you have to do is build a pipeline. The problem is not that the country is not bound geographically – after all, the highways and railroads and canals and airports and telecommunications networks have already been built – the problem is that it is not bound politically by the belief that oil sands development is unambiguously in the national interest and that, therefore, building pipelines is a national imperative. Documents detailing meetings between the Harper government’s minister of natural resources and the Canadian Energy Pipeline Association confirm that the government and the energy industry found themselves “aligned on priorities” and that they committed themselves to the “importance of communicating to Canadians” the benefits of building infrastructure that will enable rapid exploitation of the oil sands.¹¹⁸ Be that as it may, the priorities of the government and the energy industry were evidently not aligned with those of the numerically significant, well-organized, well-informed, and committed opposition to oil sands development and the pipelines required for that purpose. As the foregoing suggests, it is this political opposition that had to be overcome if the interests of the country as a whole were to be identified once again with the interests of capital, and if the allegedly “national” project of making Canada an “energy superpower” was to be achieved. It was in favour of this imperative, and against the political differences that frustrate it, that a contemporary version of technological nationalism was mobilized.

The romantic appeal of heroically conquering the rivers, mountains, ice, and plains of Canada’s geography might once have been enough to cultivate nationalist sentiment. However, uniting a nation by summoning it to defend a common economic interest for which the case cannot be made, and to identify against environmentalists, Indigenous people, ranchers and farmers, caribou and salmon, and friends and neighbours – all of whom look and sound as Canadian as the next person – is a different and altogether less viable proposition. Perhaps this is why, in the most recent proposal for a pipeline to get the bitumen moving from its hole in the ground to distant refineries and ports, elite supporters of the energy industry have reverted to the tired rhetoric of previous episodes of technological nationalism. TransCanada Corporation’s proposed Energy

East Pipeline will carry up to one million barrels of bitumen per day from Hardisty, Alberta, to refineries in Quebec and Saint John, New Brunswick, where there is also an existing deepwater tanker port. A consultant's report prepared for TransCanada pegs the project's potential contribution to GDP at \$25 billion over forty years, tax revenues at \$10 billion, and "full-time equivalent" jobs at ten thousand over the lifetime of the project, all numbers that demand the sort of critical scrutiny suggested above.¹¹⁹ Proponents have high hopes for approval of this project, as it mainly involves conversion of the existing TransCanada gas mainline to Montreal, with extensions required only for the legs to Quebec City and Saint John. The pipeline will be a boon for Saint John's Irving Oil, which will reap the benefits of a steady supply of unconventional crude at a price point significantly lower than that of the conventional oil it currently imports from around the world to feed its refinery. Recent reports indicate that "under the current plan, few permanent jobs will be created," and that "it remains unclear how much actual economic benefit the city will see from the project, especially once the short-term gains from construction have ended."¹²⁰ Irving, also a significant player in the shipping industry, has abandoned plans to build a second refinery in Saint John (which, if built, would generate hundreds of long-term jobs) and instead plans to build a crude export terminal in partnership with TransCanada Corporation, adjacent to its existing refinery. Reports indicate that "the terminal would employ just a couple dozen workers."¹²¹ Saint John currently suffers from the highest urban unemployment rate in Canada.¹²²

Shortly after the project was first announced in March 2012, former premier of New Brunswick and now deputy chair of TD Bank Frank McKenna invoked the building of the CPR as an example of infrastructure that "knit the country together both symbolically and economically."¹²³ Deploying the heroic rhetoric of bygone days, McKenna suggested that an east-west pipeline could do the same: "It is time for another bold project, national in scope: A pipeline network extending from coast to coast. This essential infrastructure project would be good for all regions of Canada. It would be an extraordinary catalyst for economic growth. It would be powerful symbol of Canadian unity." Elaborating, McKenna made it clear that an east-west pipeline would not just overcome geography and bind the country spatially, it would, more importantly, overcome the

political divisions jeopardizing exploitation of the valuable resource in Alberta's oil sands. "Much has been made recently," McKenna wrote, "about who wins and who loses from Western oil sands. This is the wrong way to look at it. We should turn this challenge into a nation-building exercise rather than encourage a corrosive debate pitting one region against another." Speaking in Saint John alongside Premier David Alward and Irving Oil executives in 2013, then-prime minister Harper endorsed the Energy East as a "Pan-Canadian project ... that will benefit the entire country."¹²⁴ His successor, Liberal prime minister Justin Trudeau, appears to agree, and has made approval of the Energy East project – under a renovated process of environmental scrutiny and Indigenous consultation designed to bolster perceptions of its legitimacy – a priority of his government.¹²⁵ Characterizing the pipeline as an opportunity for resource development that combines the values of economic growth and ecological sustainability, Trudeau declared, "That's something that Albertans and Quebecers and everyone across the country is united in wanting."¹²⁶ In this, he has been encouraged by former prime minister Brian Mulroney, who described Alberta's oil sands as "wealth that was God-given to Canada," and suggested that accomplishing its extraction will be "a big-ticket item going straight into the history book."¹²⁷ Environmental activists, Indigenous communities, and municipal leaders in British Columbia, Quebec, and elsewhere might not agree with the prime minister that facilitating movement of bituminous oil to tidewater for export is the best way to achieve the goal of environmental sustainability or egalitarian economic development but, as the CBC reported, "Industry is delighted."¹²⁸ Premier Brad Wall of Saskatchewan, a province whose economy relies heavily on infrastructure for the export of primary resources, travelled eastward in spring 2016 to make the pitch for Energy East. At a speech at the Empire Club of Canada in Toronto, he asked, "Who will benefit?" The answer: "All of Canada will benefit."¹²⁹ In light of the irreducible diversity of political positions and interests surrounding bitumen extraction and its infrastructures, and the highly differentiated distribution of its impacts and benefits, it is hard to imagine what the phrase "all of Canada" could possibly mean. This is precisely the problem that technological nationalism tries to overcome. The recurring appearance of its rhetoric in elite discourse is symptomatic of contemporary anxiety over the "corrosive" effects of

fundamental disagreement: that the politics really brewing around these pipelines might actually reflect an uncertainty about who we are and what we do, about whether exploiting resources such as the oil sands, for the profit of the few, is what it means to be Canadian. The hope is that, as Frank McKenna put it, “A national pipeline would put the issue beyond dispute.”¹³⁰ That, finally, is what technological nationalism is for.

NOTES

- 1 Jim Prentice, “Nation-Building Infrastructure: Creating an Environment for Investment,” Address to the Business Council of British Columbia, 21 June 2016, <https://www.cibc.com/ca/pdf/investor/jprentice-business-council-speech-en.pdf>. Prentice became premier of Alberta in 2014 and presided over the province’s Progressive Conservative party’s historic defeat in May 2015.
- 2 Compare Prentice’s rhetoric to the central premise of Marxist materialism: “As individuals express their life, so they are. What they are, therefore, coincides with their production, both with *what* they produce and with *how* they produce.” Karl Marx and Frederick Engels, *The German Ideology* (New York: International Publishers, 1970), 42.
- 3 On the staples economy, see Harold A. Innis, *Essays in Canadian Economic History* (Toronto: University of Toronto Press, 1956).
- 4 The phrase “standing-reserve” belongs to Heidegger’s account of the essentially extractive character of modern technological experience. See Martin Heidegger, “The Question concerning Technology,” *The Question concerning Technology and Other Essays*, trans. William Lovitt (New York: Harper & Row, 1977), 17.
- 5 Benedict Anderson, *Imagined Communities* (London: Verso, 2006).
- 6 Jonathan Vance, *Building Canada: People and Projects That Shaped the Nation* (Toronto: Penguin, 2006), xii.
- 7 *Ibid.*, xvii.
- 8 Maurice Charland, “Technological Nationalism,” *Canadian Journal of Political and Social Theory/Revue canadienne de théorie politique et sociale* 10, no. 1–2 (1986): 206.
- 9 *Ibid.*, 198. See also Jonathan Sterne, “Transportation and Communication: Together as You’ve Always Wanted Them,” in *Thinking with James Carey: Essays on Communication, Transportation, History*,

- Place*, ed. Jeremy Packer and Craig Robertson (New York: Peter Lang, 2006), 117–35.
- 10 See Vance, *Building Canada*, xvii and Charland, “Technological Nationalism,” 212.
- 11 The classic statement is Pierre Berton’s *The National Dream: The Great Railway, 1871–1881* (Toronto: Anchor, 2001). The book inspired an eight-part TV series by the same title, broadcast by the CBC in 1973.
- 12 On the TransCanada Pipeline see William Kilbourn, *Pipeline* (Toronto: Clarke, Irwin and Company Limited, 1970). On the Mackenzie Valley Pipeline, see Thomas R. Berger, *Northern Frontier, Northern Homeland, Report of the Mackenzie Valley Pipeline Inquiry 1* (Ottawa: Minister of Supply and Services, 1977) and *The Mackenzie Pipeline*, ed. P.H. Pearse (Montreal and Kingston: McGill-Queen’s University Press, 1974).
- 13 Gathering pipelines move oil and gas from the point of extraction at wellheads to batteries and initial processing facilities. Feeder pipelines move this material on to transmission pipelines, which transport oil and gas longer distances to ports and refineries. Distribution pipelines deliver refined products to the point of consumption. Canadian Energy Pipeline Association, *About Pipelines – 2012: Our Energy Connections* (Calgary, AB: Canadian Energy Pipeline Association, 2012), accessed 4 July 2016, http://www.cepa.com/wp-content/uploads/2013/10/CEPA_Our-Energy-ConnectionsE_Oct04.pdf.
- 14 The National Highway System was defined in 1988 by the federal-provincial Council of Ministers and deemed to include all “primary routes that support inter-provincial and international trade and travel.” It was expanded in 2005 to include core, remote, and feeder routes and presently consists of over thirty-eight thousand kilometres of highways. See Canada, Transport Canada, “National Highway System,” accessed 15 July 2016, <https://www.tc.gc.ca/eng/policy/acg-acgd-menu-highways-2149.htm>.
- 15 Canadian Energy Pipeline Association, *About Pipelines – 2012*.
- 16 On the distinction between readiness-to-hand and presence-at-hand, see Martin Heidegger, *Being and Time*, trans. John Macquarrie and Edward Robinson (New York: Harper & Row, 1962), 67–72. For a related, contemporary account of how technological systems are concealed by devices, see Albert Borgmann, *Technology and the Character of Contemporary Life* (Chicago: University of Chicago Press, 1984).

- 17 As reported by Leslie Young, "Introduction: 37 Years of Oil Spills in Alberta," *Global News* (22 May 2013), accessed 15 July 2016, <http://globalnews.ca/news/571494/introduction-37-years-of-oil-spills-in-alberta/>. These figures are derived from a leaked database. For figures up to 2005, see Alberta Energy and Utilities Board, *Pipeline Performance in Alberta, 1990–2005* (Calgary: Alberta Energy Regulator, 2007), accessed 15 July 2016, <https://www.aer.ca/documents/reports/r2007-A.pdf>.
- 18 United States, Department of Transportation, Pipeline and Hazardous Materials Safety Administration, "Significant Pipeline Incidents" (Washington, DC: 2013), accessed 15 July 2016, www.primis.phsma.dot.gov.
- 19 Nathan VanderKlippe, "Alberta Pipeline Leak Largest since 1975," *Globe and Mail*, 3 May 2011, accessed 15 July 2016, <http://www.theglobeandmail.com/report-on-business/industry-news/energy-and-resources/alberta-pipeline-leak-largest-since-1975/article578814/>.
- 20 Canada, Department of Finance, "Pipeline Safety in Canada," *Canada's Economic Action Plan* (Ottawa: 2013), accessed 4 July 2016, <http://www.budget.gc.ca/2012/plan/pdf/Plan2012-eng.pdf>.
- 21 On technological nationalism and the development of the Internet in Canada, see Darin Barney, *Communication Technology: The Canadian Democratic Audit* (Vancouver: UBC Press, 2005), 68–107.
- 22 George Monbiot, "Canada's Image Lies in Tatters. It Is Now to Climate What Japan Is to Whaling," *Guardian*, 30 November 2009, online edition. See also Wendy J. Palen et al., "Consider the Global Impacts of Oil Pipelines," *Nature* 510 (June 2014): 465–7.
- 23 On Alberta's opposition to the National Energy Program in the 1980s, see John F. Helliwell and Robert N. McRae, "Resolving the Energy Conflict: From the National Energy Program to the Energy Agreements," *Canadian Public Policy / Analyse de Politiques* 8, no. 1 (1982): 14–23. On Alberta's fraught relationship with the national agenda in subsequent years, including Stephen Harper's notorious call in 2001 to build a "firewall" around Alberta to protect it from abuse by the Canadian government, see Allan Tupper, "Uncertain Future: Alberta in the Canadian Community," in *Forging Alberta's Constitutional Framework*, ed. Richard Connors and John M. Law (Edmonton: University of Alberta Press, 2005), 479–96.
- 24 Charland, "Technological Nationalism," 198.
- 25 Canadian Centre for Energy Information, "Oil Sands and Heavy Oil," accessed 1 August 2016, www.centreforenergy.com.

- 26 Government of Alberta, Alberta Energy, “What Is Oil Sands?” accessed 15 July 2016, <http://www.energy.alberta.ca/OilSands/793.asp>.
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