<u>Pricing Air to Starve the Fire:</u>
<u>An Institutional Ethnography of Smart Prosperity</u>

by

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BA (Honours), Simon Fraser University, 2010

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Supervisory Committee

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Abstract

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Smart Prosperity (SP) brings together multi-sectoral business leaders, policy experts, unions and progressive NGO change makers to align Canada's civil society messaging on climate change action and policy. SP has recently found national relevance thanks to considerable policy uptake by Justin Trudeau's ruling federal Liberal party. Rooted in a neoclassical economic model of demand-management, SP positions themselves as the architects of an energy transition regime of consumer price signals. This study examines 118 of SP's academic and policy reports from 2008 to 2018 using an institutional ethnographic approach to textual analysis to consider the ideological and ontological consequences of SP's policy program for the tender geographies of communities in Canada. SP is found to contrive a terrain of energy possibilities that rests on administrative abstraction, economism and market fetishism, and which places the economic administrator at the heart of Canada's social and natural relations.

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Introduction

Canada is currently engaging in an historic and contentious energy transition plan. The Canadian Federal Government under Justin Trudeau made this clear in October 2016 with the ratification of the Paris Agreement to reduce greenhouse gas (GHG) emissions by 30% from 2005 levels by 2030, the introduction of a pan-Canadian carbon tax intended to begin in 2018 (Greenhouse Gas Pollution Pricing Act 2017) and a necessary phasing out of traditional[1] coal generated electricity by 2030 (Canada Gazette, Feb 17, 2018). Managed reduction in domestic demand for fossil energy through carbon pricing is at the core of Trudeau's vision for energy transition, while investment in renewable energy infrastructures has been tied to the expanded extraction of tar sands oil. The principle messaging of this particular transition plan was articulated by Prime Minister Trudeau months prior to its unveiling in March at the Globe 2016 Conference on Innovation. "We need to make smart, strategic investments in clean growth and new infrastructure. But we must also continue to generate wealth from our abundant natural resources to fund this transition to a low-carbon economy" (quoted in Carr, "Keynote Address to the Bloomberg's Future of Energy Summit" 2016). Trudeau's Pan-Canadian Framework on Clean Growth and his Climate Change and Just Transition Task Force offer a policy program of slow domestic energy transition within a language of progressive prosperity

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[1] Importantly, while this was first announced in 2016 as a regulatory phase-out of coal-generated electricity by 2030, the actual regulations developed demand stricter emissions standards of coal-based plants after reaching 50 years of operation or 2030, whichever comes first (Canada Gazette, Feb 17, 2018). Subtle emphasis is placed on phasing-out *'traditional'* coal generated electricity as coal use has not been regulated but instead disincentivized in the future.

and economic growth, all funded by the continued export of carbon intensive resources alongside the taxation of those same resources when used domestically.

This messaging is not the Federal Government's alone. Michael Crothers, Shell Canada Country Chair and VP of North American Unconventionals, told the Global Business Forum just days before the government announced its carbon tax plan in October 2016 that, "[f]or roughly as long as we've been refining synthetic crude, Shell Canada has been calling for a price on carbon."[2] Crothers continued, "[w]e've known this for years: If we aren't part of the climate change solution, the solution won't include our industry." In fact, Shell Canada is deeply involved in Canada's current climate change and energy transition solutions both directly and indirectly. Directly, Shell Canada began increasing its communications with the federal government by almost two-fold after the election of Trudeau's Liberal government in October 2015.[3] Shell Canada also retained lobbyist Velma McColl of Earnscliffe Strategy Group to engage government institutions regarding climate change policy specifically (Federal Lobby Registry).

Indirectly, Shell Canada is a founding member of the Smart Prosperity Leaders' Initiative, a campaign that began in March 2016 to coordinate multi-sectoral corporate leadership in

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[2] In Canada, Shell has been refining synthetic crude since it opened the Muskeg River Mine in 2003.

[3] Between Trudeau's first day in office on October 20, 2015 and the announcement of Trudeau's energy transition plan in October 2016, Shell Canada registered a total of 62 direct lobbying communications, including 28 lobbying communications with members of Natural Resources Canada, 23 with Environment and Climate Change Canada, and a further 13 which included or were directed at the Prime Minister's Office. In the year prior to Trudeau's election, Shell Canada registered 32 lobbying communications with the Stephen Harper government, consistent with their average rate (358 total communications across 11 years, or 32.5/year) during Harper's administration between 2004 and 2015 (Federal Lobby Registry).

Canada's energy transition and climate change policy. The Smart Prosperity Leaders'

Initiative involved the re-branding of Sustainable Prosperity, a market-based

environmental solutions think tank and academic research network that began in 2008

and remains based at the University of Ottawa under the guidance of Stewart Elgie. This

policy think tank became the Smart Prosperity Institute and was announced as the

Secretariat of the Smart Prosperity Leaders' Initiative, tasked with providing "research

and communications support for the activities undertaken by the Leaders" (Smart

Prosperity, "About the Secretariat" 2018). In addition to administering federal money for

research grants and funding through The Environmental Economics and Policy Research

Network, Smart Prosperity is the recent recipient of $10m[4] in mostly public funding to

grow its network of "Climate Economics, Innovation, and Policy" experts as well as to

support its "Greening Growth Partnership" with private enterprise. The focus of Smart

Prosperity from its beginning has been on pricing carbon to support slow, stable energy

transition by means of incentivized low-carbon economic growth.

In spite (or perhaps because) of the energy transition envisioned by Smart Prosperity,

Shell Canada and Trudeau, the National Energy Board (NEB) predicts a 77% increase in

tar sands production and a 30% increase in natural gas liquid production by 2040 despite

an expected — and intended — decline in domestic demand (NEB, October 2017). This

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[4] This recently announced package of funding includes a Canada 150 Research Chair appointment ($2.45m), a major grant from Social Sciences and Humanities Research Council ($2.5m), an undisclosed "private and public sector partner contributions" sum of $3m, $1m from Environment and Climate Change Canada, as well as money from Fullbright Canada ($300k) and the Jarislowsky Foundation ($250k per year for an unspecified number of years).

growth in production for export is expected primarily through greater in-situ recovery of

deeply buried bitumen and further hydraulic fracking to capture shale gas (NEB, October

2017), methods known to produce greater life cycle greenhouse gas emissions than

conventional extraction and production (Charpentier, Bergerson and MacLean 2009). As

well, it requires the movement of diluted bitumen to tide water for export, a strategy

recently reinforced by the public purchase of the TransMountain pipeline[5] amidst

considerable sub-national inter-governmental discord (Sherlock, April 10, 2018) as well

as social and discursive conflict among everyday Canadians (Adkin, April 16, 2018).

Meanwhile, global carbon emissions intensity continues to grow at a rate three-times

larger than during the decade of the 1990's in the face of ever-increasing global attention

and effort to reverse the trend (Malm 2016, 3). In fact, while the Intergovernmental Panel

on Climate Change (2007) targets a 50-85% global emissions reduction from 2000 levels

by 2050, the intervening years have shown a nearly 50% rise in greenhouse gas (GHG)

emissions, from 24.64 gigatones[6] of carbon dioxide equivalency (GtCO2) to 36.79

GtCO2 as of 2017 (Global Carbon Project 2018). Despite these disquieting numbers,

Canada's disingenuous approach to its stated global responsibility to reduce carbon

emissions goes beyond quantitative measures of allowable toxicity to the continued

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[5] At the time of writing, Justin Trudeau's government has announced its intentions to purchase the pipeline for $4.5bn in public money, in addition to an unknown amount to actually build it. Federal Finance Minister Bill Morneau, along with the Canada Pension Plan Investment Board's CEO Mark Machin, have suggested that the public pension fund may become a long-term investor (Farkas 2018), entwining the financial well-being of everyday Canadians with this carbon-intensive economic strategy.

[6] A gigatonne is a billion tonnes.

sacrifice of tender geographies in the interests of extractive capital. The social and

personal meanings of rising carbon levels are often lost in discussions of emissions

targets, in which considerable attention is focused on future-tense tipping points of

climactic and geological change. A planetary scale of focus abstracts geographies —

ecosystems, regions, communities — into land and political economic territory. Sarah de

Leeuw (2016) notes the potentially colonial nature of such a move, and draws our

attention to the ways in which we are parts of ecosystems, the ways in which geographies

make us. In pursuit of expanding the extraction of fossil fuels, Canada not only

participates in raising the global emissions profile in the abstract,[7] it also sacrifices

ecosystems both proximate (such as those along pipeline routes) and distant (such as

those suffering collapse in the face of growing pollution) to ensure expanded profitability

among resource companies in Canada. The multi-faceted question of how and why this

sacrifice occurs animates this research into Smart Prosperity.

This study examines Smart Prosperity Institute as a part and purveyor of a particular

ideological imaginary and as a producer of so-called expert knowledge at the intersection

of the social and ecological. G. William Domhoff's (2014/1967) classic work on the

power and reach of corporate actors through civil society organizations and knowledge

production networks is at the centre of this study, largely echoing through William

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[7] According to the Paris Accord, expanding the tars sands for export does not necessarily raise Canada's carbon emissions profile as the emissions will be assigned to the nation that uses the fossil fuels. However, as noted above, such an administrative technicality is a disingenuous, even cynical strategy to meet Canada's Paris Accord targets while growing its fossil resource sector.

Carroll's empirical and theoretical efforts to extend Domhoff's critique of American

corporate power into the Canadian and carbon-capital contexts. Building on Carroll's

work, this study will showcase a relatively new form of corporate obstructionism steeped

in what has been termed "new" climate denialism (Klein and Daub, September 30, 2016)

or "type 2" denialism (Carroll et al. 2018), defined as an acknowledgement of

anthropogenic climate change alongside less visible efforts to slow or disrupt energy

transition away from fossil fuels. Smart Prosperity emerges from this social moment of

evolving modes of corporate obstruction, offering an opportunity to witness the capture

of otherwise well-intentioned environmental actors by Canada's deep state relations to

extractive corporations (Taft 2017). In many ways, this study details how Smart

Prosperity draws Canada and Canadians into a global terrain of neoliberal bureaucracy

and market discipline in the name of environmentalism but in the interests of carbon

capitalism.

At the same time, I explore this capture as a process of cultural work to make coherent

the uneven development (Smith 2010) and patchy proliferation (Tsing 2015) of settler

colonial, capitalist frameworks of progress and prosperity at a time when ecological crisis

otherwise implies the destabilizing of such frameworks. Smart Prosperity evinces how

legitimacy is generated for corporate interests and how those interests in turn come to

form an apparatus of knowledges that coordinates our everyday actions. Equally, Smart

Prosperity showcases how neoclassical environmental economics are not only

reductionist about the rich complexity of social action, but also generate undemocratic

agents and institutions charged with building that reductionism into the everyday via the erection of a disciplinary architecture of choice. In sum, Smart Prosperity is explored as a Canadian example of a process in which moral environmentalism becomes entangled with a project of market solidarity, total bureaucracy, and neoliberal utopianism.

In fact, alongside changing modes of climate denialism, Canada has already seen a re-arranging of the antagonisms between extractive corporations and progressive change makers. In 2008, the World Wildlife Federation — now part of Smart Prosperity Leaders' Initiative — published a statement arguing that the environmental costs of tar sands and other unconventional fuels development could "cost us the earth" ("Scraping the bottom of the barrel" 2008). Even more recently in 2014, Broadbent Institute Leadership fellow Jason Morgus wrote on Rabble.ca about classic denialism during the Harper government,

> "More and more people are seeing the pattern: attacks on science, re-writing laws specifically for Big Oil, suppressing climate science and attacking anyone who questions their vision as anti-Canadian. And they are rising up and demanding change… Together, we hold more power than the petro-elites and their government cronies" ("Why we might be winning this tar sands fight", May 7, 2014)

In very clear and certain terms, these Canadian progressive think-tanks and environmental action groups were very strongly against the tar sands. Yet, embedded

within Canada's historic energy transition, this antagonistic bloc has fragmented, even dissolving in some respects.[8]

It is at this historical juncture that this project takes root. Now a decade old, Smart Prosperity Institute has been recently thrust into national relevance as a coordinating apparatus of corporate obstructionism and new denialism, but equally as a hopeful network of practical social change actors. Smart Prosperity is a harbinger of a totalizing marketization of environmentalist politics and an expression of bureaucratic social logics and yet offers, at least rhetorically, substantive movement forward on issues of ecological management and a just energy transition. Smart Prosperity belies the traditional makeup of a corporately funded civil society group, bringing together multi-sectoral business leaders, policy experts, unions, First Nations interest groups and progressive NGO change makers to align Canada's otherwise diverse and divergent civil society messaging on climate change action and policy. Their Leaders' Initiative includes Michael Crothers (Shell Canada) quoted above and both Megan Leslie (CEO and President of World Wildlife Federation Canada) and Rick Smith (Executive Director of the Broadbent Institute), among many others whose support for the growth of Canada's oil and gas

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[8] It should be noted the active role of the state in fragmenting this bloc, specifically through parliamentary restrictions on "political" actions by charities. In 2012, $13.4M was allocated by the Federal Conservative Government of Canada to enable the Canadian Revenue Agency to audit charities believed to be in non-compliance with implemented restrictions on political activities. Specifically targeted were those non-profits with anti-pipeline environmental agendas, and later, those with anti-poverty agendas. While many Canadian charities were simply forced out of existence by the so-called "political nature" of their mandate, many others changed their mandate, the nature of their activities or the balance of their activities to comply with the new regulations. The David Suzuki Foundation, for example, now publicly supports a carbon tax plan and has lost visibility in the anti-tar sands discourse. In another example, Environmental Defence now claims more research and fewer front line activities, though it continues to be audited annually. A timeline of these parliamentary political actions can be examined here: http://www.cbc.ca/news/politics/canada-revenue-agency-s-political-activity-audits-of-charities-1.2728023

sector alongside a market-based transition to a low-carbon domestic economy is recent

and uncharacteristic. Smart Prosperity generates an expertise intended to meld hegemonic

neoliberal social relations with normative modes of environmentalist institution and

subject construction in a Canadian context. Smart Prosperity articulates its own mission

as follows:

- "**Mapping out a course to a stronger, cleaner economy** by establishing a 10-year vision for making Canada a clean growth leader, supported by specific goals, metrics, and policy road maps
- **Bringing together a diverse group of Canadian leaders** who provide a balanced, evidence-based voice for implementing this vision
- **Demonstrating what a stronger, cleaner economy looks like** to show that clean growth is a critical economic opportunity -- not a threat -- and to build a psychology of success in Canada"

("Smart Prosperity -- About the Initiative," 2016)

Central questions — both technical and social — about Canada's energy transition

remain unposed. What does an energy transition involve? How will a new energy

economy function? These are important questions of infrastructure and investment,

capacity and operation. But as James Scott noted in his history of modern state formation,

"[e]very act of measurement [is] an act marked by the play of power relations" (Scott

1998, 27). Ultimately, then, the functional questions of our energy transition will reflect

the social and power relations of that transition. Who decides? Who benefits? What kinds

of institutions and people are needed in a new energy economy? How will our everyday

practices, our subjectivities, and our socio-political ecology be re-made through energy

transition?

The central questions of this research encircle the ontological project pursued by Smart Prosperity. Using an institutional ethnographic lens, this study examines the expert texts generated by Smart Prosperity (SP) to unpack how our everyday selves are being re-constituted within a "clean growth" policy program. Reviewing 118 academic, policy, and public documents produced or sponsored by SP dating back to 2008, I aim to bring the theoretical contributions of the institutional ethnographic method upstream to the point at which expert, socially organizing texts are conceived and generated. In doing so, this project engages in critique of SP's constructed terrain of legitimacy and legibility and aims to explore the process by which social relations become reified. Equally, an institutional ethnographic lens places a focus on the everyday construction of significant social and political realities, and centres our relations and entanglements as the terrain of social meaning generation and material world building. Using a materialist perspective, institutional ethnography examines how people take up and activate texts, rather than how texts animate people. This tension — between the lived, everyday reality of tender geographies and social relationality and the global, abstract-scientific reality of climate calamity and crisis management, between the local and the extra-local — is embraced as a productive tension necessary to understand socio-ecological change.

This study articulates the inherent harm of an ideologically neoliberal and ontologically positivist model of ecological and social change. Using emancipatory materialist theory, this project connects our built and lived environments with concepts of justice and equity, opening the notion of energy transition to critique. "We are left with the question of what

kind of energy, for what kind of freedom" (Huber 2013, 165). Smart Prosperity is considered in the context of rapid social transformation brought on by the entry of planetary ecological catastrophe into the popular, everyday imaginary. Canada's contentious policy program for energy transition underscores the need for clear and timely analysis of the structures and agencies involved in that transition.

A careful parsing of the expertise claimed and generated by Smart Prosperity reveals some of the power dynamics shaping Canada's current and supposed future energy system. This effort is neither cynical nor intended as mere verbalism. The intention of this project is to support a truly just energy transition through considered critique. Nancy Fraser offers an important way forward in this regard. "A critical social theory frames its research program and its conceptual framework with an eye to the aims and activities of those oppositional social movements with which it has a partisan, though not uncritical, identification" (Fraser 1985, 97). This project aims to push our social conversation beyond technocratic responses to ecological disaster and energy system transition and toward democratic and participatory modes of social change.

Energy Futures: Technocracy, Justice, and the Social Imaginary

This study engages a variety of literatures which overlap in their attention to issues of climate change and social transformation. The fovea of this study might be termed political ecology, a field that has been retrospectively carved out of otherwise siloed disciplines and epistemological foundations (Blaikie 2008) to articulate ecology as a matter of relations, entanglements, and socio-political negotiations (Latour 2004). Understandably, then, a discussion of the field's literature is necessarily far-ranging and its synthesis is difficult if not inherently reductive. This review of the literature does not attempt to break down the epistemological silos in this field, but instead acknowledges them as co-creating a mode of inquiry that is at once technical, social, behavioural, political, economic and, of course, ecological.

As a field of arranged rather than organic contestation, the language of political ecology can be ambivalent. Energy transition to a low- or no-carbon economy is at once a radical notion of social transformation and a technical necessity of human thriving for even ardent preservationists of the status quo. The universal aspiration toward continued livability serves to blur some of the traditional divisions in the discourse of environmentalism. Smart Prosperity offers a window into just such blurring as it works to use a hegemonic neoliberal market-orientation to curb environmentally harmful practices among economic actors, an approach referred to differently as ecological modernization or environmental economics. Insofar as environmental conservation is internalized into

hegemonic ideologies and ontologies, into common sense ways of seeing and articulating

reality, critique of hegemonic institutions must develop new language and lean on critical

political theory to articulate goals beyond bare survival.

To paraphrase Doreen Massey (2013), the vocabulary we employ shapes our political

imagination and, in particular, the emergence of a market-oriented vocabulary has been

critical to the hegemony of neoliberalism and the establishment of an individualized,

consumer-oriented everyday common sense. Such critique is often levelled at the notion -

inherent to environmental economics -- that ecosystems can be understood through their

quantifiable services to the capitalist economy (Barnaud and Antona 2014). Viitanen and

Kingston (2014) add that technology-focused eco-modernization in particular ignites a

sense of liveability through market-incentivized innovation, re-casting democratic

citizens as passive recipients of their own technology-enabled futures. Aidan While,

Jonas and Gibbs (2009) note just such a narrowing of political possibilities present in the

promise of low-carbon technologies, arguing ecological crisis has opened social life to

the uneven developments of a radically market-oriented neoliberal eco-state organized

around endless eco-governance experimentation (see Kivimaa et al. 2017). It is precisely

this market fetishism and the generative discourses of economic individuation as a model

of freedom that support the formation of political subjectivities of neoliberalism (Brown

2003). Quickly, then, the economic and technological innovations pursued by Smart

Prosperity become a matter of social organization and a part of generating what we can

imagine for our futures and what constitutes liveability. The ambivalent language of environmental sustainability gives way to a deeply contested juncture of possibility.

Eco-modernization and environmental economics are overlapping heterodox sub-fields which posit that capitalist economics can overcome ecological crisis by internalizing environmental externalities into the market, viewing "the human economy as both a social system, and as one constrained by the biophysical universe" (Gowdy and Erickson 2005, 208). The language of ecological modernization follows from the field of sustainable development, particularly as development was argued to address third-world modernization (Sneddon 2000) and suggests that technological development is a key for environmental reform (Mol and Sonnenfeld 2000). Environmental economics is historically focused on demand-side economics at the level of the individual consumer (Gowdy and Erickson 2005), but is gaining traction as a model of wide-scale economic transition in the face of climate change. At this societal scale, pricing externalities such as carbon pollution has become a model of up-stream demand management, intending to influence the behaviours of individuals and firms through price-indicators and incentives for adaptation. Bailey, Gouldson and Newell (2011) note that climate politics are increasingly conducted by, through, and for markets this way. At the level of policy planning, the potential for meaningful economic or environmental transition through such strategies is contentious (Barnaud and Antona 2014; Fey 2017; Rakotonarivo, Schaafsma, and Hockley 2016; Weizsäcker 2005). Still, this project aims to move beyond the

potential efficacy of Smart Prosperity's policy program to understand the institutional complex in which its vision of social organization is produced and applied.

Such a study is needed. Bailey, Gouldson and Newell (2011) indicate the need for critical examination of the ideological foundations and various consequences of a carbon market becoming increasingly central to neoliberal governance and argue such carbon markets may exist to delay decarbonization while opening financial frontiers. As well, examining 540 energy transition articles comprising the core of the field across management studies, sociology, policy studies, geography and modelling, Markand, Raven and Truffer (2012) indicate the need for more focused, politically engaged energy research. Specifically, the authors (2012, 962) identify the need for further development in three areas of the field: efforts to elaborate and specify conceptual frameworks for understanding historical and on-going transitions; understanding the relations of power involved in transition; and "more in-depth studies on how system and regime structures are created and changed through the strategic interplay of different types of actors." Hansen and Coenen (2015) echo this last sentiment in their review of sustainability transitions literature, finding that emphasis is placed on niche development rather than regime dynamics or social structural change. This study seeks to add to our understanding of the dynamics of structural change in the face of ecological catastrophe and necessary energy transition by exploring the institutional and material context of how we generate and activate knowledges as well as unpacking the ideological and power-laden underpinnings of Smart Prosperity's expert knowledge in particular. The following sections begin to dig into Smart Prosperity's

three-point mission of a clean economy, expert leadership, and a national psychology of clean growth.

Living in Transition: Energy Production and Social Relations

The devastation of anthropogenic climatic and environmental change is clear. The Intergovernmental Panel on Climate Change (IPCC) states that "atmospheric concentrations of carbon dioxide, methane and nitrous oxide… are unprecedented in at least the last 800,000 years" (IPCC 2014, 4). Mass extinction (Ceballos et al. 2015), ocean acidification (Orr et al. 2005), wind- and ocean-current re-organization (Hoegh-Guldberg and Bruno 2010) and extreme weather (Pachauri et al. 2014) are the simply the latest indicators in the history of ecological overload under capitalism[9], compounding concern for as-yet unresolved crises of ozone depletion (Molina and Rowland 1974), habitat destruction (Tilman et al. 1994), de-forestation (Shukla, Nobre and Sellers 1990), and desertification (D'Odorico et al. 2013). Further, popular concern about climate change is now the norm. In the lead up to the 2015 Paris Accord, Pew Research Center (Stokes, Wike and Carle 2015) surveyed people from 40 nations, revealing a median 54% of global respondents indicating climate change was a '*very serious problem*', while 85%

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[9] Such awareness is far from new. The destructive capacities of carbon specifically were recognized scientifically at least as early as 1835 (Malm 2016) and the threat of desertification by human action was discussed at length by George Perkins Marsh in 1864. Henry David Thoreau's public ascension as a populist conservationist and anti-modernist in the mid-19th century America made discursive space for John Ruskin's 1862 entry into anti-industrial ecology, "Unto This Last," and began a populist, alarmist intellectual tradition in North America that would stretch through Rachel Carson's (1962) touchstone work into the present.

agreeing that it is at least a '*somewhat serious problem*'. Canadian proportions were 51% and 84% respectively. As well, Canadians indicated 73% agreement that major lifestyle changes are needed to address climate change, while just 17% agreed that technology would solve the issues, compared to global medians of 67% and 22% in the same categories (Stokes, Wike and Carle 2015). Energy transition away from fossil fuels is widely accepted in Canada and the world to be both necessary and a matter of social as well as technical change.

Immediately, however, the prefigurative politics of transition collides with the infrastructural reality of a deeply integrated global network of energy, and further, with what Vaclav Smill (2010) calls the "intangible organizational and managerial arrangements" (1) of that global interdependency. Andreas Malm (2016, 367) offers a hopeful set of numbers for energy transition, noting that the sunlight energy intercepting the earth is 10,000 times greater than the energy currently generated by human activity and that wind alone could power our advanced energy demands. Smil (2010, 13), however, speaks to both the scale and depth of change being considered. He notes the global interdependence of the energy system, with nearly 50 counties exporting oil, almost 150 importing it, and none that are self-sustaining in the extraction and production of energy. To replace this carbon extractive energy structure requires the abandonment of sunk cost assets (Klein 2014), unparalleled investment in new energy infrastructures, and the connection of 85 exajoules of additional renewable energy to users in every corner of the planet (Smil 2010). In the Canadian context, energy transition will require

infrastructural investments well in excess of Canada's GDP (Alexander 2017) as well as a substantial reorganization of global political economy in order to replace Canada's carbon energy with renewable energy.

This technical dilemma accepts a broad definition of energy as capacity or the ability to do work (Butler, Lerch and Wuerthner 2012, 6). But here, too, we must return to a political ecology framework steeped in sociological analyses of how society organizes, makes sense of and applies that capacity. Graeber reminds us of the deeply political nature of rationality. "[T]alking about rational efficiency becomes a way of avoiding talking about what the efficiency is actually for; that is, the ultimately irrational aims that are assumed to be the ultimate ends of human behaviour" (Graeber 2015, 39). Rather than evaluating how Smart Prosperity might deliver on Canada's demand for energy within its intended energy transition, this project looks at science as a situated knowledge and examines broadly "how epistemic communities… are created, sustained and mobilized" (Peet, Robbins and Watts 2011, 4). Feyerabend (2010) reminds us that "[n]either science nor rationality are universal measures of excellence. They are particular traditions, unaware of their historical grounding" (223). The very notion of scientific fact is founded on decades of ideological theory (Latour and Wollgar 1979). The technical and economic underpinnings of energy transition must, then, be unpacked for more than their veracity. The ontological elements of energy, as well as the subject-relational consequences of energy are critical to this study.

Considering such a large scale change has elicited a number of theories about the

mechanisms that drive energy growth, and, consequently, might be manipulated to drive

change. Butler, Lerch and Wuerthner (2012) contend that the source of energy is the

issue. "Since the Industrial Revolution, exploitation of fossil fuels — the onetime

windfall of ancient biological capital processed by geological forces — has precipitated

exponential population and economic growth" (Butler, Lerch and Wuerthner 2012, 5).

David Scott (2007) argues the reverse, that the development of better services drives

demand for both absolute growth in energy use and improved efficiencies in energy

production and consumption. This division between energy functionalism and consumer-

driven market solutions is larger than can be considered here. Their brief inclusion is not

meant as a "straw-man" tactic, but rather to acknowledge the diversity of entry points

used in considering energy transitions. Energy transition is often articulated through the

lens of pragmatism, but simply acknowledging this one fundamental division in its

conception quickly draws out that how change is pursued reflects political ideologies and

agendas. "[D]iscourses about nature internalize a whole range of contradictory impulses

and conflictual ideas derived from all of the other moments in the social process. And

from that standpoint, discussion of the discourses of nature has much to reveal, if only

about how the discourses themselves conceal a concrete political agenda in the midst of

highly abstract, universalizing, and frequently intensely moral argumentation" (Harvey

1996, 174).

Considerable attention has also been given to the destructive paradigm of endless growth, particularly to the need to change our rapacious pursuit and in-built logics of growth in a finite world. Some of this work intends a radical reorientation of our political economy via changes to how decisions are made about energy (Princen 2005). Others conspicuously avoid what David Harvey (2015, 232) calls a dangerous contradiction within the logic of capitalism, namely that the concept of zero-growth precludes capitalism at a definitional level. Capitalism is premised on compounding growth by intensifying exploitation of people and expropriation of unpaid labour and nature (Moore 2014; Patel and Moore 2017).

The limits to growth thesis holds no inherent mechanism for material change, however. Uneven geographical and sectoral crisis would necessarily follow from collapsing growth, but uneven geographical crisis is actually an opportunity for intensifying capital's exploitative and appropriating relations (Harvey 2005; Harvey 2015; Klein 2008; Smith 2008). Moreover, the capitalist state apparatus consolidated in the 20th century reflects the historically contingent relations between the form of energy and geo-spatial politics (Mitchell 2009). Mitchell (2009) writes, "[p]olitical possibilities were opened up or narrowed down by different ways of organizing the flow and concentration of energy, and these possibilities were enhanced or limited by arrangements of people, finance, expertise and violence that were assembled in relationship to the distribution and control of energy" (401).

For Mitchell (2009), the method of producing carbon energy is related to the potentials of political organization. Examining the transition from localized, labour-intensive coal economies to a global transportation network for oil from the Middle East, Mitchell (2009) makes note that the latter "did not offer those involved the same powers to paralyze energy systems and build a more democratic order" (413). Instead, power accumulated to financial capital, which enabled and managed the means of capital circulation, to nation states able to capture access to oil through violence, and to the extractive firms that generated profit through expropriation.

Acknowledging, as Smil (2010) does, that the energy economy comprises more than simply the material infrastructure of production and transportation, Mitchell (2009) turns to the development of expertise. Namely, neoliberal social relations lay nascent within the expert knowledges of a reified notion of "the economy". In connection with the growth of oil as a stable, tradable and transportable energy commodity, the economy became measured by the sum total of transactions. This historically particular measurement enabled experts to plan for growth without reference to physical limitations. The emergent political, social and expert assemblages to manage, measure and manufacture an oil-powered world reflect the physical properties of oil. "The deployment of expertise requires, and encourages, the making of worlds that it can master" (Mitchell 2009, 417). Problematic for Mitchell (2009) is the possibility that the historically specific form of the state that emerged from carbon capitalism may not hold the expertise necessary to manage a different kind of energy economy.

Andreas Malm (2016) counsels that humanity has never faced catastrophic ecological collapse and that the examination of previous energy transitions does not offer a way forward. Instead, Malm (2016) offers a sense of opportunity. "[T]he fossil economy was once constructed and has since been reproduced and enlarged, and anything built over time can potentially be torn down (or escaped)" (Malm 2016, 13). For Malm (2016), the global and totalizing scope of the crisis that motivates this energy transition demands that we collectively plan the impending transition. In some ways, this is in tension with his historical account of the fossil economy as emergent from the diachronic logics of the machine form itself. Perhaps more importantly, it presumes an historical continuity with the generation and application of expertise and managerial modes of social organization and coercion that are implicated in ecological catastrophe.

Returning to the structurating (Giddens 1984) political economy of the machine form of energy, in which energy is both the medium and outcome of social practices, the capitalist frontier of enclosing radiation and kinetic energy portends vastly different spatial-temporal economic relations and state assemblages. Nevertheless, the growing coherency of renewables is made possible precisely by the movement to commodify a further commons of nominally de-valued natural spaces. Thus, to presume that the capture of renewable energy sources is linked with a morally autonomous democratic political future as its corollary machine form is fatuous. The potentiality of genuine democracy is always present in our social capacities for communication (Habermas 1984) and mutual

aid (Kropotkin 1902), but is not the teleological conclusion to any form of energy. There is no clearer evidence for this than the shifting obstructionism practiced by existing fossil fuel firms, from tactics of outright prevention and delay of energy transition to strategies of managed transition and corporate survival. Corporate obstructionism (Carroll and Sapinksi 2016; Carroll et al. 2018) in this case involves carbon capitalists making strident efforts to shape and manage social change and to proscribe radical political potentials through complex, relational state influence.

The entanglement of oil and gas companies with the policy governing their industry is not new in Canada, but is gaining attention as a roadblock to de-carbonizing social life. Graham, Daub and Carroll (2017) found the fossil fuel industry exerts considerable political influence in British Columbia primarily through lobbying and political donations. The Ministry of the Environment was a key target, registering the third most lobbying contacts since 2010 (Graham, Daub and Carroll 2017). Though Canada's environmental policy is decentralized across multiple levels of government, provincial policy regimes are largely convergent (Carter, Fraser and Zalik 2017). As well, Canada resists national-level cumulative effects assessment (Carter, Fraser and Zalik 2017; Elvin and Fraser 2012), creating a potential for decentralization to hide compounding ecological damage. Rabe and Borick (2013), analyzing US state policies, argue that a specific politics is endemic among resource-extractive governments, namely a regime of deference to industry and a minimizing of environmental protections in favour of short-term economic gain.

The consolidation of a particular political economic regime requires more than close

relations between a given industry and the institutions governing that industry. Through

interlocking directorships, firms form corporate communities (Domhoff 2006) and those

communities participate in organizing a general consensus of corporate interest (Sapinksi

and Carroll 2018; Domhoff 2014). In Canada, ownership of fossil-fuel corporations is

highly concentrated and relatively few executives participate in the broader national

corporate community by sitting on corporate boards in other industries (Carroll 2017).

Still, "the carbon-capital elite is not an entity onto itself; it is a fraction nested within the

national corporate elite, with additional ties to the transnational network," (Carroll 2017,

253). Importantly, Canada's carbon-capital sector exists in a co-dependency with the

financial sector (Carroll 2017), each fearful of the risk of stranded assets should

regulation cause a sharp downturn in fossil-fuel extraction (known as the 'tail risk' of

carbon). By lobbying various levels of government directly and by participating in

interlocking communities of corporate interest, the fossil-fuel industry is seeking to both

influence the regulatory behaviours of public institutions and shape the interests of the

broader national and transnational business community.

A critical third component of these efforts is found in the reach of carbon capital firms

into civil society. Carbon capital is an important faction in a broader effort to establish

particular corporate interests as socially and culturally hegemonic. This pattern is

historically clear. Carroll and Shaw (2001) trace the emergence of a neoliberal policy

regime in Canada between 1976 and 1996 partly through the increasing importance of neoliberal civil society groups to the organizational ecology of corporate Canada. A similar process was found at the global level, where transnational policy planning institutions "play important roles in constructing the consensus within business communities that enables corporate capital to project influence in political and cultural domains that transect national bodies" (Carroll and Sapinski 2010, 501). Carbon capital firms are particularly engaged with civil society organizations which produce and disseminate knowledge, including Universities, think tanks, and research institutes as well as more obvious industry groups and advocacy organizations (Carroll et al. 2018). Influence in this area "offers pathways into the production of knowledge, culture and identity, and opportunities to align carbon-capitalist interests with discourses of national interest" (Carroll et al. 2018, 20). Seeking influence and legitimacy by funding knowledge producers and civil society organizations also allows for arms-length efforts at regulatory influence and prominence in corporate culture. For example, industry advocacy group Canadian Association of Petroleum Producers is a major lobby group, registering 1,015 communications with the Federal government alone between 2011 and 2015 (Federal Lobbyist Registry). This multi-foci effort to exert influence over Canadian government, culture, and common sense is a critical part of this study, but must be understood in its rich, historicized context.

Canada's transformation into what former Prime Minister Stephen Harper called an 'energy superpower' was no accident of good business opportunities or corporate

leverage — it was programmatic at the state level as well. In 2012, major amendments were made to the Canadian Environmental Assessment Act that transferred environmental assessment powers and responsibilities for energy projects to the National Energy Board while exempting many such projects from review at all (De Souza 2014; Gibson 2012). As hinted at above, the move away from regulatory limits on capital was a long time in the making. Donald Gutstein (2014) traces the development and mainstreaming of radical neoliberal think tanks in Canada — sponsored by the corporate community — to show how such organizations grew organic intellectuals. Stephen Harper was one such figure, and Gutstein (2014) contends that through the production of knowledge and identity around free enterprise over several decades, Stephen Harper was both individually radicalized and empowered in a pro-business context to free corporate enterprise from taxation and regulation while increasing subsidies and protections — the ideal conditions for a petro-state (Maass 2010) and a common part of neoliberal governance to ensure investor confidence (Christophers 2017).

When considered alongside the widely acknowledged ecological catastrophe of climate change, this program of influence must be considered a matter of corporate obstructionism — that is, the use of political tactics and expertise which prevent or simply problematize swift or total energy transitions and which exclude the notion of fundamental changes to the logics of energy use (Carroll and Sapinksi 2016). The rhetoric offered by Trudeau of a measured, slow transition comes at a time when the balance of mainstream social discourse regarding climate change has shifted. We can

meaningfully speak of a broad global consensus on the need to make an energy transition

away from carbon, along with public acceptance of national action on climate change

(Stokes, Wike and Carle 2015). The scientific community is in total consensus that

humans have caused climate change (Cook et al. 2016), opening the conversation about

our uneven responsibility for the harm already caused and demanding action to prevent

further environmental damage. Even the public language used by carbon-extractive

corporations has changed in recent years from one of abject denial and purchased

contestation to what Seth Klein and Shannon Daub (September 30, 2016) termed 'the

new climate denialism':

> "In the new form of denialism, the fossil fuel industry and our political
> leaders assure us that they understand and accept the scientific warnings
> about climate change — but they are in denial about what this scientific
> reality means for policy and/or continue to block progress in less visible
> ways." (Klein and Daub 2016)

Bureaucracy and Environmental Politics

The state looms large in energy transition literature, both technical and political. This

section will not present a unifying theory of the state but attempt to articulate a

conceptual framework to be used in studying Smart Prosperity. Competing and

sometimes under-theorized conceptions of the state within energy transitions literature

can lead to fundamental confusions about the power and value of the state in making a

low-carbon future. For many, the state exists as a site of contestation between public

wills, each more or less effectively represented through formal mechanisms of party

politics and informal systems of social and material influence. Others refer to the state as a necessary organizing body for collective action on the environment, reifying its capacity for coercive social control. Critically, the state must be understood in its historical context as a socially contingent form of collective organization rather than as a trans-historical feature of human societies.

My conceptual framing begins with the work of Bob Jessop (2010) and the notion of the state as an assemblage of social relations and actors, embedded in both local and global relations of power. This theoretical move differentiates the apparatus of the state — coercive and bureaucratic functions of social control and organization — from representation, or the notion of the state as a site of political contestation. For Jessop (2010), politics does not involve pre-formed collective wills, but is the process of constructing, defining and enforcing a common will. We see in this definition the possibility of temptation for those who identify strongly with oppositional social movements to seize on this capacity to construct and enforce a common will to create a climate-friendly future. For this reason, among others, it is important to explore the assemblages of the state to reveal its capacities as contingent and mutually-manufactured with market hegemony.

Inseparable from a political economy of energy transition is the on-going transformation of the state toward a neoliberal paradigm. Finding a political and social opportunity in various crises during the 1970's, a rapid counter-hegemony unfolded from a material base

established in the 1920's and '30's and from an ideological structure erected in the post-

war period by organic intellectuals in the Mont Pellerin society, Institute of Economic

Affairs, and University of Chicago (Gutstein 2014; Harvey 2005). More proximate

change catalysts included domestic and imperial interventions by the United States to end

the gold standard in 1971 and create international markets for a rapid but unequal global

economic integration (Graeber 2015; Mitchell 2009). But equally important, a growing

awareness of the need for wide-scale environmental action was part of the many crises

destabilizing welfare statecraft in this period, opening the state as a site of conflict that

would eventually be won by neoliberal intellectuals (While, Jonas and Gibbs 2009).

The neoliberal state model draws from Friedrich Hayek in trumpeting liberal concepts of

individual, market-based freedom as the principle good to be pursued by the collective.

Hayek (1944) argues that competitive forces are best used to coordinate human efforts

and laments the rise of collectivist and statist responses to inequality. "We have

progressively abandoned that freedom in economic affairs without which personal and

political freedom has never existed in the past" (Hayek 1975 [1944], 13). Within Hayek's

foundational thinking and the current neoliberal discourse, freedom is threatened "by all

forms of state intervention that substitute collective judgements for those of individuals

free to choose" (Harvey 2005, 5).

Polanyi (2001 [1944]) offers a counter-history, in which the very notion and function of

the market emerges from violent intervention by the state. He notes that the market and

state are used in an on-going class war as weapons of sectoral interests, but that such tactics ignore the central organizing fictions of a market society. The first fiction of a market society is fundamental, namely the historically unique subordination of substance (land and labour, ecologies and people) to fiction (self-organized markets). The second fiction is ideological, specifically the claim that state intervention and planning is incompatible with a market society. Hayek's freedom, then, is manufactured and guarded by state coercion rather than a manifestation of the inherent values of people alongside the absence of state intervention.

David Harvey (2005) offers a trenchant and succinct critique of Hayek's freedom. Namely, that the freedom imagined in neoliberalism is one to own, exploit and appropriate. "The freedoms it [the neoliberal state] embodies reflect the interests of private property owners, businesses, multinational corporations, and financial capital" (Harvey 2005, 7). For Harvey, this is not merely a matter of inequality to be vilified, but actually part of a core contradiction in the nature of capitalism. Even within the most radical conceptions of neoliberal freedoms, there exists a contradiction "between the supposedly 'free' exercise of individual private property rights and the collective exercise of coercive regulatory state power to define, codify and give legal form to those rights and the social bond that knits them so closely together" (Harvey 2014, 42).

This contradiction is not static and philosophical, but an active and building paradox according to David Graeber (2015). "This apparent paradox — that government policies

intending to reduce government interference in the economy actually end up producing

more regulations, more bureaucrats, and more police — can be observed so regularly that

I think we are justified in treating it as a general sociological law" (Graeber 2015, 9). It is

at this stage that we can begin to understand the nature of neoliberal hegemony — the

underlying "conceptual apparatus… so embedded in common sense as to be taken for

granted and not open to question" (Harvey 2005, 5). While fundamentally about the

privatization of both publics and commons (Klein 2014), the neoliberal project is not one

of abandoning the state, but of using its coercive modes of social control to enforce the

market colonization of both our social and natural lifeworlds (Habermas 1984).[10]

Graeber (2015) traces the emergence of 'total bureaucratization' — that is, the

involvement of the state in every aspect of life — during this same period of neoliberal

state emergence. Equally, he notes, the use of bureaucracy in the English language and its

centrality in social sciences declines rapidly and steadily over the same period, becoming

a normalized, common-sense characteristic of our social organization. It is not merely

awareness of bureaucracy itself that is of import. James Scott (1998) shows how

bureaucratic language comes to transform our material relations as well as our perception

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[10] In an interview with Wei Xiaoping, Nancy Fraser (2013) defines the lifeworld. "The lifeworld is the taken-for-granted stock of meanings, dispositions, and norms that we draw upon when we coordinate our actions by talking to each other, instead of by market exchanges or by bureaucratic commands, which are 'system' modes of coordinating actions" (265). In this way, the colonization of the lifeworld by system highlights the shrinking of political imaginations and critical discursive spaces. Critically, this phraseology is borrowed from Habermas, but can only be meaningfully articulated through Nancy Fraser's (1985) important updates to his work. Specifically, Fraser brings social reproduction work done by women into the field of material reproduction of society, rather than symbolic reproduction where Habermas placed it. Further, this phrasing is not meant to presume Habermasian solution of communicative action, but does draw attention to the distinction between the state apparatus and the many publics (Fraser 1990) vying for representation.

of the human-nature binary by re-casting complex ecosystems as quantifiable natural

resources. Scott (1998) uses the history of the early capitalist state to show the pattern in

stark contrast to what had existed before. The pattern is clear — find a complex

ecosystem, codify and physically simplify that system for easier management, witness

that system collapse from the loss of diversity, and then re-introduce manufactured

complexity to the point of minimum diversity at which ecosystem change is invisible or

tolerable to systems of resource measurement (Scott 1998). This repeats for social

ecosystems, such as during the Haussmannization of Paris (Benjamin 1939) as well as for

natural systems such as in scientific forestry (Scott 1998). In contrast to neoliberalism's

anti-bureaucratic rhetoric (von Mises 1944), neoliberal governance has deeply intensified

the professionalized management of social and natural systems such that the mode of

management itself — bureaucracy — has become common sense. Powerfully, we can see

the logics of neoliberal total bureaucracy in even the progressive responses against the

neoliberal state today.

This is among the challenges raised by Naomi Klein. Klein (2014) notes that

incrementalist discourse in environmentalism ensures that the environment remains an

economic issue. Those environmentalist firms reliant on foundation, corporate or state

money to pursue their work, reflecting their accountability to those monies, frequently

call for 'big tent' solutions to ecological crisis that involve the voices of big business and

include the interests of the market (Klein 2015). Graeber is more colourful in his

language, noting that "the 'moderate' Left solution to any social problems… has

invariably come to be some nightmare fusion of the worst elements of bureaucracy and the worst elements of capitalism" (2015, 6). Graeber (2015) contends that common-sense applications of expert problem solving — both those claiming to be progressive and conservative — now include efforts to expand the scope of bureaucracy and enable capital colonization of our lifeworlds by rendering more of our lifeworld legible to the state (Scott 1998).

Certainly, radical political ecology responses have more to offer than a deepening of bureaucratic or coercive power. This begins with a move away from market fetishizing, bureaucratic discourses of climate management. For this, I employ the term "tender geographies". Sarah de Leeuw (2016) argues powerfully that dominant theories imagine geographies as land, resources, and territory, perpetuating a colonial lens that divorces our intimate selves from our situated, historicized places. Instead, this project attends to how our embodied, everyday geographies of self, species-being, place, and community are potential sites of biopolitical discipline as well as potential spaces of refuse from said discipline. Tender geographies are re/productive terrains of social subjectivity, entwining our material, embodied lives with the historical materialism of the larger than human world and with the ontological construction of our social imaginaries, all scaled at the level of the intimate, everyday, and relational. It is important to note how de Leeuw (2016) uses tender geographies to expose the workings of colonialism and slow violence. To imagine geographies as external to us is to perpetuate the ontology of colonial and patriarchical violence and to engage in slow violence against living people. "By slow

violence I mean a violence that occurs gradually and out of sight, a violence of delayed

destruction that is dispersed across time and space, an attritional violence that is typically

not viewed as violence at all" (Nixon 2011, 2).

Simon Springer (2016) attempts to offer a radical break from the neoliberal project by re-

imagining state power through the lens of reproduced relations of ruling. Speaking to the

continued centrality of the state in our conceptual models of social change, Springer

writes, "[i]t is precisely in the everyday, the ordinary, the unremarkable, and the mundane

that I think a politics of refusal must be located" (2016, 286). Drawing from John

Holloway's (2002) insistence that change begins in the negation, Springer is attempting

to signal that social change is larger than what can be measured in kilowatt hours or

gigajoules, but also different than who controls the powers of coercion.

This project takes up a mode of prefigurative social change at the everyday level, in

which the means of change are not means to an end but rather simply means to more

means (Springer 2016). Accepting ecology as inherently dialectic, this project extends

Murray Bookchin's phrasing of this relationship — that "nature is the history of

nature" (2007, 4) — by acknowledging that the future of nature includes our present

prefigurations, both material and ideational. Change, then, is not only located in the state

either through representation of interests or wresting control of the coercive apparatus

from entrenched capitalist powers. Change is also located in the capacity of prefigurative

action to empower and embolden a counter-hegemony from below.

The Ideology of the Practical Expert: Ontologies and Our Social Imaginary

In this section we return to the third pillar of Smart Prosperity's intended mission to

ground the discussion of the role of imaginaries in Canada's energy transition, the third

and final constituent site of actor interplay for this project. To refresh the reader, the third

component of Smart Prosperity's mission is:

- "Demonstrating what a stronger, cleaner economy looks like to show that
  clean growth is a critical economic opportunity — not a threat — and to
  build a psychology of success in Canada"

We see in this articulation of mission an open claim on the psychology of the

nation. Significantly, this is subsumed under a statement about the centrality of

growth to a transition economy that is at once banal and strident, so familiar as to

cause the reader to skim and yet reaching to colonize a global future with the

profoundly ideological common sense of the present.

The value of the concept of social imaginaries is to enlarge the space of interplay

between an everyday, individual level of intention and a hegemony of coordinated

ideological action. Charles Taylor (2002, 105-106) focuses on the legitimated

ideational associations of modernity itself as enabling meaning-making and

everyday practices under capitalism. The social imaginary is broadly normative and

fictive, reflecting our expectations and sense of how society fits together rather than

reflecting or corresponding to the real. This notion of the social imaginary adds a

subtle opening for social psychology to Lukacs's (1971) perspective, in which the superstructural elements of our society are not determined by but instead (re-)made in the same historical, dialectical process as our material relations. In its intentional vagueness, the social imaginary offers a mutable terrain of collaboration and contestation necessary for considering an unknowable social future under energy transition. In short, its use is meant to signal the importance of interpersonal associations, mutual learning, and collective prefigurations (new expectations, new imaginaries) in change, rather than leaning on material and phenomenological re-organization of our superstructural possibilities, and apart from the liberal notion of society as an aggregation of individual psychologies.

My choice of 'social imaginaries' is not an exclusive one. As discussed in the Methodology chapter, marxian theory is a critical theoretical foundation of this study and of institutional ethnography in general. I recognize the important work of historical materialist thinkers to develop a sense of how hegemony functions through ideology as phenomenological practice. However, the addition of a more open sense of social imaginaries serves to invite considerations of the affective dimensions of our ideological practices and the coordination of not only our "organizational and managerial arrangements" (Smil 2010, 1) but our collective articulation of the so-called good life. Matthew Huber (2013) offers a compelling study of how fossil energy is deeply interwoven with an affective notion of "the

good life" as well as the ideological practices constituent of extractive liberal capitalism.

Huber's (2013) work offers insight into the realization of the neoliberal subject as a process enabled by the mastery of reproductive life through oil and a social imaginary "aligned with the logics of capital — freedom, property, and entrepreneurialism" (xv). "This particular cultural politics of entrepreneurial life is not possible — is not made common sense — without the material transformation of the everyday life centred upon reproductive geographies of single-family home ownership, automobility, and voracious energy consumption" (Huber 2013, 23). The neoliberal freedom to own and master reproductive spaces reinforces the artificial cleavage between work and home, and requires "ceding control of the realms called the economy, market, work, and production to the despotism of capital and its imperatives of competition and accumulation" (Huber 2013, 161). The entrepreneurial subject, having traded any claim to a democratized economy and thoroughly convinced of the power to choose a lifestyle, reproduces a capitalist metabolism with nature.

We must confront here the centrality of "extractivism" (Klein 2014) — a sense of nature as rightfully dominated for its use-value — to our social imaginary and our practice of contemporary ideology. Where mastery over reproductive spaces generates an artificial separation of work and home, it also supports the cleavage of

the human animal from the planet's many reproductive eco-systems on a broader scale. The degradation of the dignity of nature outside the human through extractivist ideology contributes to our sense of righteousness in the material destruction of that same nature. Equally, then, we have to acknowledge that the harm of such ideology is internal to us and not only a matter of externality or victimizing other organisms. "Alienation from nature is alienation from our own species' potential" (Harvey 2014, 263). As Althusser (1971) reminds us, the reproduction of capitalist relations requires not only the reproduction of the component parts of that relation, but the reproduction of the relation itself. The structure of capitalism not only participates in re/producing that relation, but is itself re-made from alienated relations (Moore 2011). Extractivism — a metabolism of throughput and the right to profit — holds that we expropriate from our planetary ecology at the same time as we conceive and measure the planet as a set of resources and yearn for the good life of freedom from the restraints of social and natural limits. Our everyday actions — both social and productive — serve to reproduce an imaginary of extractivism, made real in both the relations and infrastructures of our alienation.

While the term extractivism engenders a pejorative connotation to the ontological presumptions of human exceptionalism, the same ontological foundations are rendered common sense in the form of economic rationalism and entangled with a notion of freedom-from with the invention of the individual economic actor. "[T]he

neoclassical model of the individual was built on political claims about the emancipation of the individual from repressive social, political and economic control; of freeing knowledge from power; of liberating the individual from nature" (McMahon 1997, 165). McMahon (1997, 167) continues, "the individual of neoclassical economics is intimately tied to the individual of liberal political theory and rests on deeply dualistic, hierarchical, psychological and political structures: man versus (and above) woman; man versus nature; reason versus emotion; mind versus body." The subject-actor at the centre of neoclassical economics is masculine and colonial, and is individualized through an array of self-other dualisms (McMahon 1997). Equally, this market-based subjectivity is a highly legible subject to bureaucratic systems of governance and policy. His rationalism and public-sphere orientation makes him responsive to price signals, market changes, and investment opportunities. The field of microeconomic behaviourism, drawing on neoclassical ontologies, posits that this subject can be carefully managed toward an ecologically sound, consumer capitalist lifestyle.

As we will see in future chapters, Smart Prosperity's energy transition is premised explicitly on this neoclassical microeconomic subject as part of what it terms environmental economics. Despite SP's claim that this field is "non-controversial" (SP, Jan 2010, 11 and 13), the critiques of neoclassical environmental economics are considerable and growing. We will return to these

critiques in the Discussion. For now, we must turn to the study itself to consider the

just transition Smart Prosperity has conceived and constructed for Canadians.

Institutional Ethnographic Practice: Foundations and Adaptations

This thesis draws upon an institutional ethnographic approach. Institutional ethnography (IE) is often associated with its inventor, Dorothy Smith, who first sought to "address the problem of a sociology written from the standpoint of men located in the relations of ruling our society" (Smith 1987, 1) by developing a situated mode of feminist inquiry into the everyday workings of power. Smith addresses the ontological limitations of the masculine universal subject, noting that "objectivity was deeply infected with assumptions that relied on excluding women and their concerns and experience from the discourse" (Smith 2002, 18). IE has continued to develop beyond an exclusively gendered standpoint and is now commonly referred to as a "sociology for the people" (Smith 2005). Critically for IE scholars, everyday life is a necessary entry point for understanding how ideological practices intertwine with our material actions. Institutional ethnography is a rich sociological practice (Smith, Oct 23, 2017) rather than a procedural method.

This chapter will explore the underpinnings of this sociological practice and how the approach of IE has been applied in this study, as well as detail how this study was conducted. The methodological limitations of this study will also be considered here, while limitations regarding my findings and the applicability of this study are discussed further below. Importantly, this study uses IE in a somewhat new and innovative way, engaging with the early production of what IE calls texts.

Texts are social artefacts conveying a standardized message (Bisaillon 2012) and are integral to the ordering and sense-making of social relations, as well to the administration and regulation of people's lives (Kinsman 1995). Where texts are compared to the central nervous system by Devault and McCoy (2004, 765) — connecting many otherwise separated sites and processes in a complex but tangible way — my use of IE engages in a sort of nerve conduction study. Instead of exploring a specific site and finding its interconnection (starting with the local and seeing the connection of the extra-local) this study explores the development of a coordinating set of texts intended to connect the everyday of Canadian communities to the ruling relations of a global, extractive, technocratic capitalism. While this is not the first institutional ethnography to use primarily or exclusively texts as data, this study does represent an unusual way of applying Dorothy Smith's rich sociological practice.

The Practice of Institutional Ethnography

IE has primarily been used to explore workplaces. In fact, Peter R. Grahame (1998) highlights three core components of Smith's institutional ethnographic approach as: 1) addressing ideological practices; 2) studying work processes through which "people are themselves involved in producing the world they experience in daily life" (Grahame 1998, 353); and 3) discovering how local practices and processes entangle with extra-local social relations. IE has most commonly been used in studies of healthcare and

human services workplaces, where the intersection of bureaucratic mechanisms, positivist logics, and coercive hierarchies are entangled with broader social power dynamics of gender, class, and expertise, and where ideological practices are disguised within a normative moral economy of health and safety. This interplay of institutionalized and routinized power relations with normative ideological processes has made healthcare workplaces a particularly fruitful area of inquiry for institutional ethnographers (see Braaf, Manias, and Riley 2013; Campbell 2000; Hamilton and Campbell 2011; McGibbon, Peter, and Gallop 2010; Mykhalovskiy and McCoy 2002; Quinlan 2009; Rankin 2003; Rankin 2004; Rankin 2015; Rankin and Campbell 2006; Rankin and Campbell 2009; Sinding 2010; Winkelman and Halifax 2007; Vukic and Keddy 2002). IE need not been limited to studies of formal workplaces, of course; in fact, IE defines work with a feminist New Left sensibility as anything "people do that takes some effort and time, that they mean to do" (Smith 2005, 46). Our conscious, purposeful activities are the true subject of Grahame's (1998) second criterion listed above, and this definition of work as intentional practice places standpoint feminism at the centre of IE's theoretical project.

Smith (1990) notes that other modes of sociological inquiry ignore the socially situated subject in her local actualities. Instead, sociologists "abjured such a standpoint" (Smith 1990, 2) to generate abstracted subjects conforming to an objectively reliable epistemology. "[S]ocial organization is necessarily a specific organization of practices through which subjects always and ineluctably located in the actualities of their bodily

being participate in and accomplish… objectifications" (Smith 1990, 2). In this way, knowledge comes to coordinate and organize how we accomplish objectifications according to various interests (Campbell and Gregor 2008, 16). Importantly, Smith articulates a thoroughly social constructivist standpoint theory in which objectivity is always regarded as a move to power rather than to truth. A focus on how objectivity comes to be taken up and acted out in a relational manner — what Smith calls ruling relations — sets Smith apart somewhat from other standpoint feminist theory. Harding's (1993) famously liberal standpoint theory argues for the building of a synthetic understanding of society by collecting many subjective perspectives and collating them into a "strong objectivity," a rich, inclusive array of truths about a given social order. Haraway's (1988) similarly well-known situated knowledges posits that the objective is found in the embodied and partial, effacing the discursive power of universalized objective epistemology in favour of a new science of the experiential. While Smith (1990b) shares much in common with these other standpoint theories, including the importance of embodiment and that knowledge is socially situated, her focus on how observable phenomena exist concurrently with social relations (rather than corresponding to social relations) highlights her materialist ontology.

In fact, Smith (1990b) builds directly on marxian materialism and Marx's theory of ideology. "Although Marx views consciousness as inseparable from actual individuals, although he analyzes ideology as practices, and although he gives consciousness a preliminary materialist formulation, he stops short at the investigation of the social

relations and organization of consciousness. But we need not" (Smith 1990b, 51-52).

Terry Eagleton (1991) reminds us that Marx has two versions of ideology present in his

work. "Note that whereas in *The German Ideology* ideology was a matter of not seeing

things as they really were, it is a question in *Capital* of reality itself being duplicitous and

deceitful" (Eagleton 1991, 87). Where Marx indicates that the latter, structural fictions of

material capitalism require political economy to unmask, Smith (1990b, 32-34) argues

that an exploration of the former contributes to a radical ontology grounded in the

activities of actually existing people. Drawing on *The German Ideology*, Smith (1990b)

posits that ideology involves the abstraction of the real by way of concepts, then used as a

mode of interpreting the real. "To think ideologically… identifies methods of reasoning

that confine us to a conceptual level divorced from its ground… the internal relations in

the observable between concept and the actualities of co-ordered activities is

ruptured" (Smith 1990b, 41). This concept of ideology is critical for IE, but has lost

favour in recent years, weighed down by baggage accumulated over many decades of

diverse and often conflicting Marxist work. While not all critiques of the theory can be

addressed here, two are important to dispel before moving forward.

The Marxist concept of ideology has long been stained by a dubious application of "false

consciousness" wherein some critical minds understand the plural interests of society

clearly while others, particularly the non-revolutionary working class and various

conservative elements of society are engaged in a type of mystification. Terry Eagleton

(1991, 89) draws our attention to the fact that Marx never used the phrase false

consciousness; it was a phrase used by Engels in 1893 after Marx's death, re-casting a collective and cultural notion of ideology as a matter of self-deception. Eagleton (1991) points to this revisionist definition as especially appealing in the context of Sigmund Freud's psychoanalytic emergence at the turn of the century, contending that an individualized, psychological model of ideology is taken out of its Marxist context. But perhaps more importantly, Smith avoids this issue of false consciousness (and its presumption of a true or correct consciousness) by her use of standpoint, situated knowing in conjunction with her recognition that 'knowers know' as a constitutive element of how ideology is practiced rather than held. Following Smith, this project makes no claim that anyone has been tricked or misled, or that subjects present in the study lack critical insight into their personal and social worlds. Instead, we must recognize from Lukacs (1971) that both the material world and our social imaginaries emerge and are continuously re-made in the same historical moment. "Thought and existence are not identical in the sense that they 'correspond' to each other, or 'reflect' each other, that they 'run parallel' to each other or 'coincide' with each other (all expressions that conceal a rigid duality). Their identity is that they are aspects of one and the same real historical and dialectical process" (Lukacs 1971, 204). This is yet another way of indicating that the task of IE and of this study includes identifying how our larger historical moment (what Smith might term 'extra-local relations') conditions both thought and existence unevenly, clearly apart from a method intent on showing how people misunderstand social power.

The second issue that must be addressed is the colloquial notion that ideology is synonymous with bias. Again, such an idea posits that ideology is purely a matter of consciousness and is held by individual agents or actors. Left undiscussed above, however, is the factional notion present in this definition. Particularly concerning in this account of ideology is the defence of the status quo, whereby all non-majority ideas are held as ideological. The discursive power of this definition is considerable and may deserve a genealogical unpacking beginning with the state-led cultural policy of the Cold War. Still, in reference to this study, the epistemological foundations of this notion of factional bias are counter to those of IE. This study does not consider ideology to exist as an individual's filter to social consciousness, or to persist as a matter of group delusion that prevents a liberal utopianism of inclusive harmony.

For Smith and IE, the nature of ideology is inherently performative and embodied rather than a matter of how people think or conceive of the world and their relations. An ideological world is (re)made through our activities and it is the coordination of these activities toward particular material interests that concern the ethnographer. In a thoroughly Marxian way, we might consider the method of institutional ethnography as exposing the superstructural apparatus as a complex, interwoven system of constantly contested texts that generate purpose and meaning to the activity of reproducing the material conditions of capitalism. By starting in the real, the ethnographer can quickly become aware of the rupture between the experiential standpoint of participants and the abstracted, objectified accounts present in relevant texts. Of course, such a sociological

project involves the experiential and draws in questions of critical consciousness, strategic compromises, and material resistance. But this study takes a different approach, instead attempting to capture a moment when would-be academic critique and policy verbalism are suddenly elevated to become coordinating texts. These same questions of how we live and how we respond persist, but this study focuses more intently on questions of ontology, legitimacy, and power.

Using Institutional Ethnography in New Ways

The potential for this method to address environmental catastrophe is clear. The re-producing of ecological relations that are rapacious and expropriating is a participatory, daily event across innumerable local sites. The coordination of this constant re-making of the world is not only or always coercive, active and malicious. Instead, it occurs through many good intentions, our best legible knowledge, and our sense of meaning and purpose, through a social imaginary grounded in the same historical conditions as a materiality that circumscribes our access to "the good life," or even to the necessities of life at all.

This study uses an institutional ethnographic method and approach to explore this coordination. Smith (1990b) gives us the tools for precisely this task.

> "Objectified forms of knowledge, integral to the organization of ruling, claim authority as socially accomplished effects or products, independent of their making. Because they are in fact forms of social organization, though, we can

> explore them as matters within our reach, as aspects of our ordinary
> competence, as social relations in which we participate, though they do not
> begin and end with our participation"
> (Smith 1990b, 61).

IE begins with three premises, according to Deveau (2009): that people are experts of their own lives; that subjects (and thus subject generation) exist in a plurality of locals; and that extra-local forces shape how people understand and act in their everyday lives. Deveau (2009) calls attention to these extra-local forces as the crux of relations of ruling.'

Institutional modes of knowing are an important part of the relations of ruling. Scientific claims hold power in our rationalized society, but more radically, the epistemic and ontological ways of making life legible to scientific study shape our social relations to power and our expectation of what constitutes truth and reality. "The result… is that the presence of active subjects who are knowers of their everyday worlds is eliminated in favor of an abstracted mode of knowledge constituted in terms of the relevances of a ruling apparatus" (Grahame 1998, 349).

Typically, institutional ethnography is done as ethnography of everyday living intended to expose extra-local relations of ruling, both those normalized and reproduced, and those questioned and contested by local people. Devault (2006, 296) notes a next step, "which would involve empirical study of the intellectual institutions that produce… meta-discourse and the interests that fund and support them."

In the case of Smart Prosperity, this demands an interrogation of not only the political

economic power of carbon capital to obstruct or even define energy futures, but also its

involvement in the social construction of both human agency to overcome natural

limitations (Mitchell 2002) and the Canadian subject as a neoliberal, entrepreneurial

subject (Huber 2013). The institutional ethnography method first developed by Dorothy

Smith offers a means of tracing the diachronic trajectories of how we imagine and

interact with extra-local forces such as 'nature' and 'the economy.'

For institutional ethnography broadly, texts "create a juncture between the local and

specific — books, papers for example which are activated in the local settings — and the

extra-local and abstract" (Smith in Widerberg 2004, 2). In contrast to most empirical

research where texts are used as sources of information about something else, Dorothy

Smith (2001) argues that texts are essential elements to the objectification of institutions

by mediating and authorizing our activities. Texts "provide for the standardized

recognizability of people's doings" (Smith 2001, 160). Thus, this study involves a critical

analysis of the many texts created by Smart Prosperity, including their public-facing

documents, open-letters, policy papers, and research contributions not as information

about policies, but as a generative terrain for standardizing people's doings.

This is not the first IE study to use primarily texts. The goal of institutional ethnography

— to "make social relations visible as people actively constitute them, while critiquing

the facticity of ruling relations and perspectives" (Carroll 2004, 165) — can be

accomplished using a textual analysis. Nancy Bell's (2001) study of a child's death from

malnutrition focuses on how textual accounts of illness and dying mediated the activities

of health care professionals by generating an authoritative account and coordinating the

relational activities of those people. Smith's and Turner's (2014) edited volume offers a

rich variety of textual ethnographies, including those from expert settings. George Smith

(2014) examines how legal texts and job requirements coordinated systematic

homophobia among Toronto police in the 1980s. Lauren Eastwood (2014) explores how

United Nations policy experts are organized into extended sequences of action as they

activate the textual rules of their organization in the production of regulatory policy. In

effect, UN experts complete what Smith and Turner (2014) articulate as an "institutional

circuit," activating texts to guide the process of generating texts.

This notion of an institutional circuit is important for understanding that SP's experts are

not pre-social, or pre-textual. They are, in fact, participating in the activation of textual

relations while generating textual relations. Indeed, this is part of how extra-local

relations come to intersect with the local. Below I will detail the procedures of my study.

Procedures

This study focuses on the texts generated by Smart Prosperity. Using IE's flexible

definition of texts, the output of Smart Prosperity is immense and growing ever more

rapidly. SP's public output includes multiple social media accounts, various public

activities of their 28 'Leaders', two websites, seven coordinated 'initiatives', 180 blog

posts, 78 listed events, 39 media releases, 45 listed media mentions, and hundreds of

reports (as of Jan 31, 2018). As well, Smart Prosperity includes a network of largely

independent researchers at many universities and manages the Economics and

Environmental Policy Research Network, a research granting organization funded by the

Government of Canada's Environment and Climate Change Canada Department

(institute.smartprosperity.ca/economics-environmental-policy-research-network). Further,

Smart Prosperity occasionally posts other related work by scholars associated with its

network, as well as works from other organizations which confirm SP's analysis. The

sheer volume of its public output presents a challenge in analyzing Smart Prosperity, but

it is the diversity of this material that makes a comprehensive ethnography awkward if

not unfeasible. This study focuses specifically on SP's policy and academic reports.

I collected reports from Smart Prosperity Institute's website, where all of SP public

materials are made available for public viewing and download. SP's materials are posted

on the website along a descriptive blurb and stock imagery. Reports were downloaded,

reviewed for relevance and completeness before being included or excluded, and then

uploaded into ATLAS.ti for analysis. In ATLAS.ti, reports were stored by their date as

well as title and then reviewed chronologically from the earliest reports by SP (May

2008) to the most recent. As SP is still producing new material, a cut-off date of January

31, 2018 was chosen for collection and inclusion.

An institutional ethnographic approach to data analysis involves continuously asking of

the data, what does this say about how this happens as it does? (Campbell and Gregor

2008). Instead of cutting and sorting the data into organized sets of concepts or into

descriptive exemplars, institutional ethnography requires examining the relations that

made the data possible, as well as the relations the data makes possible. Specifically, I

read into the local and extra-local material conditions and discursive realities that

intertwined with SP's claims to understand the epistemological and ontological reality of

these texts. Still, as I was dealing with a large volume of data, I employed several

qualitative techniques to support my inquiries, including inductive coding to capture

recurring patterns, grouping the data by topic to consider those patterns in new ways, and

drawing out quotations to serve as memory aids.

The process of finding meaning in the data — true analysis — occurs primarily through

writing in IE (Campbell and Gregor 2008). It is anticipated and accepted that the

reproducibility of this study is limited despite the public availability of the data as I, the

researcher, am also socially situated.

Nature of Data

As discussed above, the data for this study are professional, expert documents written by

educated academics participating in the SP network of scholars. The content and format

of these documents vary from policy briefs of roughly 10 colourful, artfully designed

pages to large economic studies of 150 or more pages of dense academic text. All of the included documents were written by SP associated scholars, SP staff, and/or researchers funded through The Economics and Environmental Policy Research Network administered by SP. Included studies are branded as Sustainable Prosperity (2008-2016) or Smart Prosperity (2016-2018) and released under the banner of the organization.

Smart Prosperity is organized as both a social "Initiative" (Smart Prosperity Leaders Initiative) and an academic "Institute" (Smart Prosperity Institute). As noted above, the Institute is the secretariat of the Leaders Initiative. This structure emerged alongside the organization's re-branding in October 2016, coinciding with Prime Minister Trudeau's announcement of his government's climate policy program. From its first report in May 2008 until this point, Smart Prosperity was known as Sustainable Prosperity and described itself as such:

> "Sustainable Prosperity is a national policy and research network aimed at building a healthy environment and economy, by making markets work for the environment. Based at the University of Ottawa, it is a non-partisan, multi-stakeholder research and policy initiative that aims to build a greener and more prosperous economy for all Canadians."

In its first report from May 2008, Sustainable Prosperity's tagline read, "Making markets work *for* the environment" (original italics).

A critical part of Sustainable/Smart Prosperity is its multi-focal nature. While its mission can be understood as singular — to generate a rigorous apparatus of market-based sustainability solutions — the organization seeks uptake of this mission at every level of

public governance. To this end, SP has generated material on how to align integrated

community sustainability plans with market and incentive based models of sustainability

governance (October 2015), made numerous submissions to municipal, provincial and

federal government bodies, and lobbied a variety of sub-governmental bodies including

the Social Sciences and Humanities Research Council of Canada (May 13, 2016),

Statistics Canada (May 2016), and any number of Universities where their funding

supports various academics and students.

Inclusions and Exclusions

All documents posted to the Smart Prosperity website under "Research + Publications"

between the dates of May 2008 (SP's first upload) and January 2018 were downloaded

and reviewed for consideration. Of 179 total postings reviewed, 118 reports were

included in this study.

Exclusions were made for a variety of reasons, both practical and theoretical. Many

reports were posted multiple times on the SP website and, of course, analysis was not

repeated. As well, some report summaries were available without access to the full report

and so were excluded for lack of completeness. In a similar vein, Working Papers were

excluded categorically on the basis that they may not represent fully formed ideas or data,

and because they may not have the full support of Smart Prosperity's other activities

(having yet to be branded as such). Further, reports not authored by or branded as

Sustainable/Smart Prosperity were also excluded. While this may seem obvious, Smart Prosperity does post work from other organizations that goes to support its broad tenets. Excerpts of book chapters contributed by SP network scholars appear on the website. These were excluded for lack of necessary context as well as for being incomplete. Finally, starting in 2010, SP produced a number of expert submissions to municipal, provincial and federal standing committees, issue task forces, and semi-public bodies. Many of these are excluded because the actual submission was not shared publicly — only a cover letter was posted to SP's website. As well, I have chosen to not analyze the few available submissions to municipal and provincial issue panels because of the contextual complexity surrounding invitations and calls for such submissions. It is of note that Smart Prosperity is participating at every level of government in Canada and is involved in issues ranging from transit planning in the Greater Toronto Area (SP, Jan 2011) and the Ontario Standing Committee on Social Policy (SP, Nov 2015) to the BC Climate Leadership Plan (SP, Sept 2015; SP, Mar 2016). However, the local and province-level complexities of analyzing these submissions alongside SP's public facing activities is cumbersome and draws away from the central project.

It should be noted that while a cutoff date for inclusion was necessary for practical reasons, the rate of SP's public posting has continued to climb since their re-branding in October 2016. In the short period between February and April 2018, 13 more postings have been made to the Research + Publications section of the website alone. Clearly, the organization continues to grow and develop.

Limitations

The main limitation of this study is the lack of primary qualitative research that, in most

IE practice, would ground the study in a particular local setting. IE is a deeply marxian

practice of ideology studies and thus rests on how hegemonic material relations come to

influence the everyday material realities of people and communities. An IE project

without interviews is problematic from the perspective of methodological purity but also

problematic for avoiding a truly historical materialist ontology. However, this project

examines an ideology-generating organization that is not immediately involved in the

material practices of energy transition, but instead participates in generating a hegemonic

frame that weds populist environmentalism with market-utopianism by appealing to a

competitive nationalist mentality. SP does not build or fund climate mitigation projects,

nor do they directly plan or build infrastructure. They articulate how neoliberal capitalist

relations can persist despite reaching and exceeding planetary boundaries and seek to

generate a coordinating hegemony in an historical moment of contradiction. In effect, this

is a study of a ideology-purveyor and so necessarily lacks the material grounding of most

marxian ideology studies and institutional ethnographies. Consequently, it is appropriate

(if unusual) that this study uses an IE practice but remains somewhat abstract.

Nevertheless, no institutional ethnography to date has included an analysis of this amount

of textual data. Where other studies have taken up single forms, whole policies, or even

entire professional conduct guidelines, the ranging scope of SP's work involves policy on

energy, water, taxation, pollution, and much more at every level of government and

institution across Canada. As such, a reasonable argument can be made that the scope of

this study is larger than suits an institutional ethnographic method. A similarly reasonable

argument could be made that this study captures only a small part of Smart Prosperity's

considerable efforts at influence. Left out of this study are all of their professionalized

and well-coordinated social media efforts, their 78[11] listed events, various traditional

media releases and sponsored content, and dozens of reports that were excluded from this

study. Other studies could examine SP's leadership group exclusively for their roles as

facilitators of influence and integration into Canada's business community.

Many more studies can and should follow to expand the scope and depth of the work

presented and eventually to ground this study in the phenomenological realities of

communities being coordinated by SP's burgeoning success. In the case of this study, I

am conscious of many of the extra-local relations that come to organize my doings as a

graduate student and I have sought to balance these with my particular solidarities. The

institutional requirement that I conduct and produce a professional research study is an

important part of my coordinated activities, but no less important are the various

competitive pressures of a neoliberal university (Dean 2016) that constrain my time and

resources to conduct further research on an already massive organization. This

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[11] As of January 2018.

entanglement of the personal and institutional is one small part of limiting the scope of this research project.

Much more important for understanding why this study is designed without primary research is my intended solidarity. Much of this study reads like a critical discourse analysis but I aim to draw out a David Graeber-like sensibility toward public policy as necessarily indicative of an apparatus of ruling. A very similar project could be accomplished with a policy analysis that focused on policy as a matter of factional interests in our indirect democracy. Yet I hope to evoke a sense of possibility that goes beyond Polanyi's (1944) articulation of how factional interests wrestle for influence over the state.

Primary research could have been conducted on the organization itself. While the texts produced by SP are the result of everyday relations of ruling — arguably via institutional circuits — they also move beyond the ritualizing of existing social relations toward generative administrative practice. That is, while SP does activate and reproduce ruling relations, it also produces the ideological apparatus of administrative environmentalism in a neoliberal context to be taken up by Canadian governments as modes of ruling. In this context, I acknowledge my solidarity with the very concept of tender geographies, understanding that I cannot capture the affective or collective meaning of all of the locales intertwined by SP's texts.

Grounding this study with interviews and observation of the people producing these texts

would change the nature of the study considerably. The site of expert text production is a

distributed set of socially empowered, largely independent scholars. Of course,

researchers in Canada experience coordination of their activities according to the norms

of academic institutions increasingly organized by neoliberal governance ideals,

including the expectation that research achieve financial success and demonstrated

applicability to industry and government (Gray 2013; Heller 2016; Slaughter and Leslie

1997; Toepler 2001). Nevertheless, to ground this study in the extra-local coordination of

research activities would be to move it away from questions of energy transition and

energy democracy toward those of intellectual freedom and academic capture. I choose to

focus on the material realities of all Canadians that are potentially coordinated according

to the work of SP to explore not how the attentions of experts are slowly shaped by

corporate obstruction but rather how the application of expertise comes to shape our

everyday world. Matthew Desmond (2014) shows that relational ethnography can focus

on "boundaries rather than bounded groups, processes rather than processed people, and

cultural conflict rather than group culture" (547). While being attentive to Smith's notion

of ideology as involving the abstraction of the real, this study uses an institutional

ethnographic theoretical framework and a relational ethnographic sensibility toward

processes of coordination.

I seek to position Smart Prosperity as a generative site of the discursive and textual expert

power that currently defines and will continue to define both everyday practices and the

subjectivities manifest from them. Smart Prosperity is not only generating policy

language for how the state should act, but is developing normative language about

Canadian subjectivity at the level of both economic ecologies and national imaginaries.

Most critically, this project engages the intersection of our everyday sense of the given

and the construction of choice that underlies the possible.

Smart Prosperity: Architects of Choice

SP has been producing policy-focused reports by academically trained researchers since 2008. Between 2008 and 2016, the organization was known as Sustainable Prosperity and functioned as a think tank out of the University of Ottawa. Beginning in October 2016 — coinciding with Trudeau's announcement of the federal government's energy transition intentions — Sustainable Prosperity re-branded as Smart Prosperity and launched its corporate and civil society Leaders Initiative. Seemingly all at once, the federal Liberal party took on a variety of SP's policy suggestions and aligned itself with an apparent national consensus in favour of carbon taxation to reduce emissions. SP was thrust into national relevance.

As noted above, however, SP's policy program is calcifying into a contested framework rather than consensus in Canada. Recent provincial elections have included wins for parties who oppose various parts of SP's designed national strategy, including opposing pipeline expansion (Sherlock, April 10, 2018) in BC, or carbon taxation in Saskatchewan (McCarthy, Feb 18, 2016) and Ontario (Kassam, July 3, 2018).[12] Much of the public conversation regarding the federal Liberal energy transition plan leaves aside the critical

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[12] It should be noted that the oil and gas industry were heavily involved as obstructionists in these elections in a variety of ways. For example, Syed and Cribb (July 5, 2018) describe the efforts of Canada's largest oil lobby group, CAPP (Canadian Association of Petroleum Producers), to sway Ontario's recent election by way of organizing a campaign regarding 2019's federal election to coincide with Ontario's provincial election. In particular, 13 swing ridings in Ontario were targeted for billboards, 400,000 mailings were sent to homes, 24,000 letters were sent to "key decision makers" at various levels of government, and an unknown number of rallies were organized, in addition to a concerted social media campaign. While the messaging was about the federal government's pipeline and carbon taxation policies, the timing, locations, and coordinated messaging of their efforts indicate a multi-level campaign.

nuance necessary to move beyond partisan debates and instead take up the problematic of

how expertise is mobilized to contrive the terrain of energy possibilities and to design an

illusory schema of individual environmental choice. The analysis of SP's policy program

to follow aims to draw out how the organization positions individual choice as a matter

for abstracted bureaucratic management while centring the capitalist marketplace as the

substance of Canada's democratic and energy futures.

SP articulates a coherent plan to re-make Canada's social and physical planning to

support a slow, measured energy transition that supports exceptional real and financial

capital growth. While much of SP's literature deals with matters of pollution pricing, the

organization's policy program is actually quite diverse and includes the transformation of

Canadian cities toward greater density and less automobile use, a commitment to reduce

or eliminate what SP terms "net" bio-diversity loss, a re-imagining of what public

institutions should accomplish, and a focus on economic growth in low carbon sectors

that SP terms clean innovation for a green economy that matches to measurable

ecological limits. Together, SP's policies set out a plan for how the Canadian state can

draw in private interests and, with them, manage social and natural geographies to

resolve the crisis of carbon emissions without disrupting the principles of a liberal

capitalist society. My concern is not for the veracity or hubris of this managerial platform,

though both will be addressed. The central problematic to be explored involves how a

certain type of economic expertise is employed to shape our sense of what is appropriate,

acceptable, and even possible with regard to energy transition, liveable futures, and democratic participation.

Of course, it was not an overnight transition to such political uptake for SP. In 2012, its Advisory Group included the then-Director, now VP of Environment and Sustainability for Cenovus Energy (John Mitchell)[13], TD Bank Group's former Senior VP and Chief Economist (Craig Alexander)[14], and a former federal Commissioner of the Environment and Sustainable Development as well as the then-lead of Deloitte's Sustainable Development and Climate Change department (Johanne Gélinas)[15] among others. In the years between 2012 and 2016, SP's reports frequently included an Acknowledgements section in which bureaucrats at every level, academics from across the country, and business leaders from a variety of industries were thanked for their review and commentary. It is clear that during these years, SP was living up to its self-identification

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[13] This department at Cenovus has undergone considerable change during Mitchell's career. From 2009-2012, Mitchell was the Manager of Environment Policy and Strategy for Cenovus, then becoming the Director of Environment and Sustainability, then -- in April 2016 -- the VP of Environment, Sustainability and Public Policy. We can witness the increasing centrality of this issue within the Cenovus corporate hierarchy in the changing titles of the department coinciding with Mitchell's stepwise elevation in the company. Equally, Cenovus retreats from collaboration with SP, and moves toward a carbon survival model of so-called environmental innovation. On its website, we find: "At Cenovus, we know oil can be part of a clean energy future. That's why we're especially focused on technology and innovation to help us find both incremental and game-changing solutions to the environmental challenges associated with oil production and consumption" ("Innovation", cenovus.com/reports/2016/environment)

[14] Alexander is now the Senior VP and Chief Economist of the Conference Board of Canada. TD Bank Group -- a prominent funder of continued tar sands development and bitumen pipelines (McLachlan and Hatch, July 21, 2017) -- is not part of SP's Leadership Initiative.

[15] Insurance firm Deliotte remains a part of SP's Leaders Initiative, but Gélinas is now a partner in a consulting firm and is in charge of its Sustainability and Greenhouse Gas Management practice and sits on the Member Council of Sustainable Development Technology Canada (SDTC).

as a "multi-stakeholder" (SP, Mar 2015)[16] organization "bringing public and private

sector decision-makers to the table with expert researchers" (SP, Nov 2015). Engagement

with public and private organizations spanned SP's many policy issues as well.

For clarity, this chapter is organized loosely around these different policy issues. I have

not articulated each issue with the same specificity as SP would because my intentions

are not to examine the efficacy of its policy-planning program but rather to consider how

that program coordinates a particular sense of our energy futures, both opportunities and

responsibilities. We will consider how SP discusses its own role in Canada's energy

transition, what its goal of a green economy means at an everyday scale, how complex

ecologies become organized by simplified metrics, why SP says Canada needs innovative

public institutions, and how all of this is entangled with market frontiers and carbon

pricing.

What Smart Prosperity Says About Itself, and What That Says About Smart Prosperity

This subsection takes up some of the language SP uses to ease the reader into an

ecological economic paradigm while reflecting on some of the ways SP's vernacular

establishes carbon energy as a matter of abstract administration potentially optimized

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[16] All Sustainable Prosperity and Smart Prosperity references will be listed as 'SP, Month, Year' to avoid confusion. Some of their work has clearly stated authorship from a network scholar or scholars. Others have no clear authorship beyond the organization itself.

through economic expertise. Perhaps the most important understanding to reach about SP

is its intention to do good in the world through the lens of social and environmental

justice. Its primary focus is on the engineering of a low- or no-carbon economy for

Canada, a country that currently produces over 700 megatonnes of carbon-equivalent

greenhouse gasses (Environment and Climate Change Canada 2018) in an era when

scientific consensus demands a rapid and complete cessation of such emissions. As

alluded to above, energy transition is not on the agenda of many of Canada's polluters

and the efforts and successes of SP to generate political and economic momentum toward

an end to carbon emissions are noteworthy. Equally, from its earliest reports, SP is clear

in favouring a progressive energy transition that accounts for existing social disparities,

particularly around wealth and income. Discussing "market tools for sustainable

communities," SP (Feb 2010) articulates the potential for user-fee systems to change how

towns and cities manage water, waste, and electricity consumption and draws on its own

earlier work to offer a general rule for user-fee programs. Namely, "they [user-fees]

should be paid by users, they should not be regressive, prices should be set to ensure a

full recovery of costs (financial as well as environmental), and prices should be scaled to

reduce consumption at all levels of the income spectrum" (SP, Feb 2010). In this brief

aside by SP, we can see the many values of the organization come to life. Markets should

work *for* the environment, says SP's earliest tagline. SP aims to "help innovative ideas

inform policy development" reads its self-description from July 2010 until July 2015. At

the same time, as we unpack SP's notions of progressive taxation and just transition, we

can see some of its less explicit assumptions mobilized as well.

Often left unstated, the assumptions underpinning the claims of SP's market-instrument

environmentalism are laid bare in an early report titled "Smart Budget" (SP, Jan 2010)

aimed at instructing municipalities on user-fees as demand management. SP offers a rare

and detailed explanation of the logic behind using price signals as a policy tool for

environmental change. This includes a break-out box in which environmental economics

is explained as a neoclassical microeconomic theory in which the environment has

economic value because it "provides resources (renewable and non-renewable),

assimilates waste, and provides aesthetic pleasure to humans. These are economic

functions because they have positive economic value and could be bought and sold in the

market place" (SP, Jan 2010, 13). While this might be reductionist or even troubling to

many, and academically old-fashioned to other economists (Fey and Iselin 2017), SP

builds from this assumption an entire worldview of potential social engineering based on

policy-driven economic behaviourism that all rests on the relative price effect theory.[17] In

this rare moment of academic frankness, SP begins to insert its economic expertise into

an apparatus of ruling using the allure of facticity and an expression of social engineering

via the market and state as objectively true at the level of pragmatism.

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[17] SP asserts in this report that neoclassical environmental economics are "non-controversial" (SP, Jan 2010, 11, 13). SP's assumptions are problematic even within the limited field of economics. Relative price effect theory and behavioural rationalism are heavily criticized within the field of economics for the assumptions of fixed preferences (Fey 2017) and discrete choices (Rakotonarivo, Schaafsma, and Hockley 2016). In fact, "[t]his assumption has always been disputed, and, indeed, in the social sciences outside of neoclassical economics the assumption has never been accepted by anyone. Modern economics, especially experimental economics, has raised additional doubts about the realism of this behavioural assumption" (Weizsäcker 2005, 2).

SP adds a functionalist optimism to this potential socio-environmental engineering.

> "Neither firms nor consumers want to cause excessive environmental degradation. However, they operate in a system that inevitably results in just that — through thousands of daily, economically rational decisions that fail to reflect environmental costs… Clearly, prices do influence behaviour. Government policies – deliberately or otherwise – influence those prices. There is no question of using prices and policies to 'engineer' behaviour; they already do so" (SP, Jan 2010, 11-12).

Under these assumptions, pricing carbon will inevitably allow governments to manage demand — a common theme in SP's work — and will allow economically rational citizens to express their otherwise suppressed preferences for sustainability. To take SP seriously requires accepting economic language to explain socio-ecological relations, a reductionist move that inscribes particular possibilities into our relations (Massey 2013). More subtly, though, SP conjures a ruling apparatus where the state is a necessary and ineluctable manipulator of everyday social behaviour that can be better optimized by economic experts, where SP is included in social policy as architects of choice.

In the organization's first White Paper, SP (June 2012, 6) insists on expanding the definition of a so-called green economy to move beyond production and consumption to "encompass all sectors in the economy, including Canada's important natural resources sector, and not just those that create environmental goods and services." SP (June 2012) identifies four ways to green the economy: increasing resource productivity or efficiency; identifying eco-system limits in terms of ecological services; improving global competitiveness and innovation by "convert[ing]… natural capital into other forms of wealth, such as produced [infrastructure] and human… capital" (SP, June 2012, 44); and

increasing economic resilience to climate change and other shocks. The language SP uses

is, of course, economic. But the reader might notice a historical specificity as well;

competition, innovation, efficiency, and human capital are words indicative of a

particular neoliberal ideology (Holborow 2015). Such linguistic ties to a neoliberal

imagination become more pronounced over time.

SP's second White Paper (June 2017) is a six page list of policy-relevant, market-focused

research questions, departing from the academic stylings of the 50-page, highly empirical

report from five years earlier (June 2012). After re-branding as Smart Prosperity, SP's

self-description changes as well. Suddenly, SP team members "deliver world-class

research" (SP, Apr 2017) rather than conduct research of a quality deemed acceptable by

their academic peers as any university research unit might do. SP claims to generate

"real-world solutions" (SP, Oct 2016) and "practical policies" (SP, Feb 2018) on the back

of "new thinking" (SP, Oct 2016), employing a marketing tactic called brand personality

to evoke a sense of competence and sincerity (see Aaker 1997) while participating in the

neoliberal imaginary of globally competitive governance excellence. SP's reports become

more polished over time, replacing academic procedural norms with corporate reporting

norms, but the core intentions remain the same. Local, land-based understandings of

Canadian eco-systems, grounded authority (Paternak 2017), and the countless tender

geographies of a largely unceded landmass are avoided to articulate how a state-managed

system of competitive and efficient resource management — built from the aggregation

of engineered rational micro-behaviours — can disconnect Canada's economy from

ecological harm and instead connect it to ecological services.

There are factual issues with SP's work, largely framed out by a disciplinary adherence to

neoclassical environmental economics and a neoliberal sensibility of the practical and

possible. But importantly, SP's work includes no cynical moments intended to mislead or

trick people. SP is an intentionally pseudo-academic policy exercise by experts trained in

disciplines noted for their exceptional procedural skill. The following sections, then, deal

with how SP employs procedural skill to generate a social reality and how that reality

connects both the physical geographies of Canada and the everyday lives of Canadians to

a competitive model of governing for global investors.

Greening the Economy with Clean Innovation: Capital Competition and Progress Ideology

SP's "green economy" functions as both an absolute goal of capitalist growth

disconnected from environmental harm and as a disciplining regime of market ideals. The

process of how to accomplish a more sustainable economy involves re-imagining a

variety of public bodies and instruments to stimulate private investment in an amorphous

bundle of industries known as "green technology," a phrase shortened to the globally

recognized portmanteau "cleantech" after SP's re-branding. As we unpack this industry,

however, we begin to see that the process of so-called greening is about opening public

services to private interests, making sustainability in communities contingent on

profitability for global investors — i.e., privatization and corporate obstruction. As a

goal, the green economy — defined as an economy that fits within measured ecological

limits — is offered as a universal, planetary positive endorsed by SP's many stakeholders

across a broad political spectrum. Yet, the offer of a sustainable economy is not an open

opportunity for Canadians to decide their future, but is a more-or-less complete policy

package waiting to be funded, and, in SP's articulation, potentially held back by irrational

social actors unaware of its economic promise. This interplay of an already greened

future postponed by market failures and economic irrationality will return as we consider

the future of what SP calls clean innovation.

SP's case for clean innovation in Canada rests on engaging in global competition for

private investment. "The global demand for clean innovation — new technologies,

products, and practices that improve environmental performance — is rapidly growing…

Canada's cleantech sector can tap into a fast-growing global market that is expected to be

worth as much as C$2.5 trillion by 2020" (SP, Apr 2017, 1). While clean innovation is

presented as a clear win-win for the economy and environment, the threat of economic

crisis looms large for SP as well. "In particular, climate change poses an unprecedented

environmental and economic threat. Long term estimates of the cost of climate change

are that it could cut between 5 and 20% of the world's wealth by the end of the

century" (SP, Mar 2009). Presented as push and pull factors, opportunity and calamity

work together to define an economic problem, one that has a very narrow solution of

public policy support for profitable private investment opportunities.

> "[G]overnment involvement is particularly important to catalyze clean innovation.
> But it must be done wisely, through targeted measures that reduce market
> uncertainty and unleash private initiative and investment to carry new technologies
> through to market. Innovation is a system, which includes research, development,
> and ultimately commercial deployment and diffusion" (SP, Apr 2017, 2).

Articulated inside the problem of "unprecedented and growing environmental

challenges" (SP, Apr 2017, 2), government responsibility to ensure a welcoming

investment climate takes on a patina of social and environmental justice while

establishing a profitable growth economy as a necessary part of a post-carbon future.

The potential cost of greening the economy through public investment becomes a key

entry point for market fetishism. SP's core principles articulate the need to mobilize

unproductive global investment capital to afford reducing carbon emissions. In a

presentation about their Tooling Up for Climate Change municipal policy program, the

case for incentive-based market instruments over strict anti-pollution regulation is

discussed as a matter of expense. "The main advantage of economic tools is that they

achieve environmental goals with greater flexibility and at lower costs than conventional

regulations. This often gets at the core problem that holds governments back from setting

ambitious environmental standards: it will cost too much to achieve them, thus hurting

the economy" (SP, Mar 2016). This simple — though frequent and familiar — warning of

the threat to an opaque "economy" as an autonomous, necessary and natural phenomenon

is much more than verbalism. Amidst material ecological harm and collapse, SP's market fetishism serves to reify the relations of capitalist economic production into another at-risk material world. Bureaucracy is then given the task of protecting these at-risk worlds, one living and one abstract.

In every element, administrative abstraction takes the place of lived reality and the absence of harm is offered as the equivalent of flourishing. Through measurable abstraction, SP comes to generate coordinating texts for their so-called green economy. Environmental harm is quantified as GHG emissions and species death while a liveable environment rests on simply the absence of such interference. In parallel, the naturalized, fetishized market is measured in gross domestic product and industry-specific growth, replacing the complex and multi-layered ways in which people interact economically, and is imagined to flourish in the absence of regulatory imposition. Policy is the rightful mode of managing this inverted world in which real ecosystems and tender geographies are made abstract and abstracted measurements of human relations are made real. For SP, the only appropriate policy for this green economy is that which supports technological innovation.

The green technology or cleantech industry is never fully examined by SP. In a detailed definition, SP (May 2016b, 7) draws from the OECD to define innovation as an improved

product or service, new marketing method, or new organizational method and adds that

clean innovation must reduce environmental impacts or improve environment outcomes.

In a 2015 "green economy factsheet," SP offers a descriptive definition of the cleantech

industry from Analytica Advisors, writing, "[c]lean technology is much more that solar

and wind energy. In Canada alone, the overall industry… is made up of 10 clean

technology sectors" (SP, Sept 2015, 1). This same language of cleantech and same broad

definition is also used by Sustainable Development Technology Canada (SDTC),[18] a

government sponsored, arms-length cleantech funder also cited by SP. SDTC boasts that

the industry includes 800 companies, 55,000 jobs, and over $17bn in revenues in Canada

(SDTC, "Canada's Cleantech Sector" 2018) and lists 356 SDTC funded cleantech

projects across eight industry sectors. In the language of SDTC, this includes "Energy

Exploration and Production," a sector termed "Extractive Processes and Products" by

Analytica Advisors. To examine Energy Exploration and Production cleantech projects

funded by SDTC is to witness the abstract promises of a clean, innovative economy

slowly transform into a list of publicly funded research and development efforts to

improve the production efficiency of the fossil fuel industry, including through greater

automation. Funded projects include better imaging for in situ tar sands wells ($3m in

public funding), better heating for in situ bitumen production ($5m in public funding),

[18] SDTC was created in 2001 under the Jean Chretien led Liberal party.

carbon capture and sequestering (total of over $12m in public funding[19]), and better

bitumen pipeline leak detection (total of nearly $11m in public funding[20]). In fact, nearly

$30m in public funding has been spent through SDTC to help cleantech companies

working on bitumen pipeline issues alone, none of which propose remediation or

management of stranded assets (SDTC, "Projects" 2018).

The very words "innovation," "clean," and "green" offer a symbolic re-framing of what

otherwise might be termed production efficiency[21] or industrial energy efficiency. In an

early report, SP (Oct 2009) draws attention to the 9% of Canada's total GHG emissions

that are labeled to come from "Fugitive Sources." Fugitive sources include any irregular,

unintended, or accidental releases of (in this case) GHG air pollutants and are of

considerable importance to the Canadian Association of Petroleum Producers since a

2005 agreement with the Petroleum Technology Alliance of Canada (see CAPP, Jan

2007) to support producers to reduce such emissions as a part of their air quality efforts.

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[19] This total excludes Direct Air carbon capture and GHG purification projects. Without carbon capture or GHG purification, the total includes $2.44m to CO2 Solutions for their enzyme capture technology, $5m to Petroleum Technology Research Centre Inc. for their project to store carbon in saline aquifers, $500k to Mikro-Tek to inoculate plants from toxic carbon in the soil, $2.41m to Saskatchewan Power Corp. to use carbon to control mercury emissions from coal-fired plants, and another $1m to CO2 Solutions to develop their enzyme capture technology. Some of the funding in these projects actually come from private sources funneled through SDTC, including an unknown amount from the Canadian Gas Association given to CO2 Solutions. In all cases, SDTC funding is meant to leverage more public and private funding. It does not fund whole projects.

[20] This includes $1.825m for FlyScan Systems, $1.794 for Syscor Controls and Automation, $2.3m for Hifi Engineering, $1.3m for Pure Technologies Ltd., $1.06m for Synodon, $2.47m to InvoDane Engineering.

[21] This is a crude metric often found by dividing the amount of production by the amount of person hours required.

Instead of building a new and different economy, these activities can be described as

improving industrial management.

While proponents will contest that this is a small part of the $17bn industry, expanded

fossil fuel development is an intended part of SP's innovative economy, but with

innovations to reduce its rate of ecological impact. Returning to the issue mentioned

above, SP positions this better future as simply awaiting funding. And in 2015, SP wrote

what would become a talking point for the federal Liberals during an increasingly

divisive pipeline development plan and is equally an explanation of how bitumen

development fits into the cleantech industry.

> "Canada's inability to get new pipelines approved to the coast costs our economy
> an estimated $18 billion per year, because we cannot get the world price for our oil.
> A large part of the opposition to those pipelines, in the US and BC, is driven by
> concerns that Canada must do better on climate policy and reducing the oil sands
> environmental footprint. Canada's oil industry now recognizes that better
> environmental performance, by them and the government, is critical to their
> economic future. Some major oil CEOs are publicly calling for a price on carbon,
> to help drive clean technology investment" (SP, Sept 2015, 2).[22]

Improving bitumen pipelines may only draw a small pocket of SDTC's funding, but we

can see in the quote above how this policy program begins to come together to ensure the

profitability of Canadian extractive industries through greater productivity. The

definitional inclusion of bitumen exploration, production, and transportation as a

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[22] It should be noted that the $18bn figure used by SP (as well as by Trudeau and others) comes from a
January 2016 report by the Conference Board of Canada. However, the Conference Board of Canada
estimated that the Trans Mountain project would result in $18.5bn in revenue over the first 20 years of the
life of the pipeline, or $925m annually. See Acuna, Feb 9, 2018.

cleantech sector not only generates social license for fossil fuels as plausibly more safe

and clean, but also makes research and development into delivering Canada's tar sands to

a global market via pipeline a matter of investment in clean innovation. The green

economy is not necessarily about energy transition, but about reducing inefficiencies and

externalities to meet the goals of an ideological market-ideal. As with other issues above,

SP's honesty about how this plan for a stronger economy declines with the rebranding to

Smart Prosperity. Nevertheless, SP's articulation of how the Canadian economy should

function more effectively remains entangled with global investment and corporate

interests, while its use of symbolic reframing and market fetishism underpins a

bureaucratic move to ensure investment stability.

In fact, global investment is a critical part of the green economy and is a key mechanism

by which the next generation of energy infrastructure is to be privatized to generate profit

for a certain segment of financial capitalists. During their six years tracking the labelled

green bond and climate-aligned global bond[23] markets (SP, June 2012; Sept 2013; Mar

2014; Dec 2015; Oct 2016; Oct 2017), SP shows the immense growth of debt sold to fund

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[23] Green bonds and climate-aligned bonds work exactly like typical bonds. They are issuances of debt to be repaid with a set amount of return. These are most commonly "use of proceeds" bonds earmarked for green projects, but backed by the issuer rather than the project to which the funds will be earmarked (Climate Bonds Initiative 2018). Bonds are labelled "green" by the issuer by voluntarily following a best practice guideline (Green Bond Principles 2014). The green definitions are left to the issuer. There is no regulation to determine the genuine sustainability of the project seeking debt financing at this level. Bond can be verified to conform to a further Climate Bonds Standard to become Certified Climate Bonds and are then evaluated against a 2 degrees celsius warming limit (Climate Bonds Initiative 2018). Such bonds are counted within the broader green bond market. Climate-aligned bonds are not labelled by the issuer as green bonds but are recognized as funding cleantech sectoral development. They are often counted alongside green bonds as part of a broader mitigation/adaptation market movement, but are not help to any standard of sustainability, voluntary or otherwise.

energy transition infrastructure and other adaptation efforts. Global issuance of such

bonds grew 25-fold from 2012 to over USD100bn in 2017 (SP, Oct 2017). In 2017,

Canadian green bond issuance exceeded all other years combined at $3.8bn, with the

largest issuers being TD Bank and Export Development Canada (SP, Oct 2017). Among

banks, TD Bank is also the largest investor in the TransMountain Pipeline to bring

Alberta's bitumen to tidewater in British Columbia (McLachlan and Hatch, July 21,

2017). SP argues in their "Bonds and Climate Change" reports that Canada should be

issuing a sovereign green bond to attract global capital to support infrastructural change.

In the rush to attract global capital for energy transition, the question of why the bond

market rather than traditional public borrowing is simply omitted. More than simply

opening financial capital frontiers, private asset valuation is also a *text* that sets capitalism

in motion to realize that speculative value such that private investment can serve to

discipline so-called green infrastructure toward a profit orientation.

Canada's new Infrastructure Bank, launched by the federal Liberals in 2017, offers a

parallel and instructive example of how changing funding mechanisms for public

structures and services become sites of corporate accumulation. Sanger (Nov 30, 2017)

argues that a plan intended to support municipalities by using federal borrowing rates was

rejected after the federal Liberals outsourced their policy-advising to McKinsey

Consulting[24], who found that low borrowing costs were a problem because they led to

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[24] It should also be noted that SP cites work by the McKinsey Consulting group in a number of reports
regarding green investment.

negative yield bonds — that is, debt that would not produce positive returns for private, global investors but would simply be paid back to lenders at a rate that improved affordability for municipalities and tax payers. Following the advice of McKinsey Consulting, the Canadian Infrastructure Bank was launched as an institution that brokers competitive private capital to find public projects in need of funding, guaranteeing a high-yield, low-risk bond backed by government payments and user-fees for services and infrastructure that enjoy a natural monopoly (Sanger, Nov 30, 2017). This plan increases the rate of borrowing and cost of public projects but gives municipalities access to private investment capital and, in this case, leverages market capital for infrastructure development. Canada does not have a sovereign green bond as SP suggests it should, but it would work in much the same way. Green projects, underwritten by the state, would borrow money from private investors at very high yield rates to be re-paid through taxes and user-fees. Not surprisingly given this model, increasing centrality of the global financial sector to a national economy is linked to increasing rates of inequality (Tridico 2017).

While the issues of who benefits might draw our immediate attention, the issue of how this coordinates our post-carbon world is arguably more pernicious. Through this private, high-yield funding model, Canada's green economy is shaped according to investor interests and corporate opportunities. Particularly as we unpack what cleantech is, why clean investment is expected to grow, and what it means for Canada's infrastructural future, it is clear that SP's green economy is meant to champion a set of global ruling

relations that aim to extend the future of oil, increase consumption, and erode public

services.

According to their 2016 Launch Report, the purpose of the re-branded Smart Prosperity is

"[t]o harness new thinking to map out, and accelerate Canada's transition to a stronger,

cleaner economy" (SP, Oct 2016[25], 1). The motivational prose of this document goes on

to extol the "evidence all around us that Canada has the know-how to marry our

economic and environmental values… A clean, strong economy is the natural extension

of our Canadian values and culture" (SP, Oct 2016, 1). The harnessing of a "natural",

seemingly trans-historic nationalist identity lends normative credibility to a report

otherwise inundated with the language of change. In fact, some form of "innovate" is

used 155 times in a report with 53 pages of text, "new" is used 200 times, and "smart" —

an apparent euphemism for SP's particular version of innovation — a further 179 times,[26]

making 10 such words per page. Nevertheless, upon posing the question, "Why Canada

Needs Smart Prosperity," claims about the importance and centrality of an innovative

economy to Canadian values suddenly give way to concerns of global competition. In

bold print, SP writes, "[t]he world is changing and the most advanced economic players

are forging cleaner, more innovative economies" (SP, Oct 2016, 1). SP goes on, "an

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[25] SP's 'Launch Report,' titled "New Thinking" is dated from February 2016. However, it was not posted online until October and SP continued to released reports under the banner of Sustainable Prosperity until that release date. For reasons of clarity and academic norms, I have chosen to use the release date.

[26] The title of the report (which includes both 'new' and 'smart') appears on 61 pages of the report in a recurring header. Word counts cited do not include these repetitions.

emerging consensus of the world's most trusted economic and business authorities is that

the global economy is moving toward a new low-pollution model built on clean

innovation. This transformation is inevitable, and Canada must act fast to secure a

prosperous future as the world's leading economies reinvent themselves" (SP, Oct 2016,

18). Some form of "global" appears an average of three times per page (158 mentions),

offering a small hint at how SP positions Canadian economic and environmental values

as a matter of global competition and how innovation is the coordinating terrain of that

competition.

Meanwhile, earlier in 2016, SP published two reports[27] regarding how the public sector

could adapt to promote clean innovation toward the green economy. Important for

understanding SP is the commitment in these reports to accountable government

autonomous from private interests and lobbyists (SP, Mar 2016b). At least in rhetoric, SP

acknowledges the risk of a captured government in which particular industries are able to

dictate policy. The ways in which SP's policy vision coordinates a particular energy

future are more nuanced than simply being captured by corporate interests despite uptake

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[27] SP produced two reports on this same topic by the same researchers, but they have significantly different content. A team of SP researchers from the University of Ottawa were awarded a Social Sciences and Humanities Research Council of Canada (SSHRC) Knowledge Synthesis Grant in 2015. As part of the requirements of that grant, the researchers produced a report entitled "Accelerating Clean Innovation in Canada's Energy and Natural Resource Sectors — The Role of Public Policy and Institutions." This report to SSHRC was posted on their website in May 2016. In March 2016, a differently organized report by the same authors was published called "Getting Institutions Right: Designing the Public Sector to Promote Clean Innovation."

by government and endorsement from high-emissions industries.[28] The invention of a

timescale tied to greening the economy is part of this nuance. Innovation, according to SP

(Apr 2017, 2), must exist as a policy commitment outside election cycles and party

politics as it will "require a sustained commitment over a number of years, and close

coordination between all governments, the private sector, and civil society." A need for

sustained support is common to many policy frameworks, but in this case, also serves to

elide any recognition of disjuncture at the site where a phenomenology of ecological

crisis meets imposition of settler-capitalist frameworks of progress and prosperity. The

coordination of a particular timescale of energy transition is discussed below in more

detail, but is not the only way in which SP's policy program organizes our social

knowledge about energy transition.

For all the rhetoric about innovation and new thinking, SP exemplifies new climate

denialism and, in fact, has developed the policy program for the bureaucratic

achievement of a new denialist regime. SP recognizes the stark, troubling reality of

climate change and the need to do something about it. But as with other ecological

modernization plans, SP's climate solutions only address measurable environmental

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[28] Another study might focus more intently on these connections for patterns of influence. Smart Prosperity is at the centre of a web of political action to support and legitimize Canada's climate change policies under the federal Liberal government. Energy companies including Suncor, Syncrude, Alterra Power, Shell Canada, and Teck Resources, as well as industry groups for high-emissions sectors (the Cement Association of Canada, the Mining Association of Canada, and the Aluminum Association of Canada among many other companies and groups) endorsed a letter stating that "[p]utting a price on carbon… is the most cost-effective way to reduce emissions, stimulate innovation and drive energy efficiency" ("Letter to First Ministers from major business and civil society leaders," Oct 4, 2016). Another very worthwhile project could examine SP's well-managed social media presence through the lens of greenwashing Canada's worst polluters.

problems and only insofar as long-term profitability and growth can be enhanced, including in the fossil fuel sector. SP's more subtle coordination of a profitable future in the face of ecological crisis is found in the simultaneous suggestion that government should be flexible to shifts in industrial dynamics and innovation, sheltered from short-term political pressures, embedded in private sector policy networks, and able to compete for global, domain-specific talent using temporary and flexible project designs (SP, Mar. 2016b). Again, the language of neoliberalism — talented (instead of educated or skilled), dynamic, flexible, competitive — emerges as part of reorganizing government to be much more responsive to the needs of industry but shielded from the short-term political pressures of the electorate. Arguably, this is the precise dynamic playing out with the TransMountain pipeline discussed above, wherein somewhat vague notions of investor confidence and investment stability are used to discipline government attentiveness to global investor interests as well as those of a national and somewhat regional carbon industry while simultaneously shielding the government from other factional or democratic interests. The promise of capital investment flows comes to shape state action as well as the everyday notion of what the state is for, but also re-shapes the geography of the fossil fuels industry to efface the experiences at local sites of infrastructure in favour of a now-national (and nationalist) geography of public interest. Investment in cleantech is slowly revealed as a plan to open public services to private interests in radical ways, from funding to institution design, and serves to coordinate a particular type of state with a nationalist and global orientation. But this question of what cleantech actually is still lingers. Can it genuinely reduce harm to the environment?

Net Bio-Diversity and Natural Capital Assets: Bureaucratic Equivalencies for a Well-Managed Tomorrow

Some of SP's policy instruments, like biodiversity offsets and natural capital accounting, lack the same punchy rhetoric of clean, innovative transformation. Nonetheless, these two ideas are important to understand in detail because of what they communicate about SP's discourse on natural eco-systems and how that discourse seeks to shape our relationship to natural systems. It is at this stage that we begin to move beyond the neoliberal orientations and sectoral biases embedded within SP's policy program to uncover its underlying socio-ecological metabolic rift. That is, we will witness that in contrast to SP's stated intention to decouple ecological harm from economic growth, its plan merely changes the elasticity of that relationship. SP's ecology is one of human exceptionalism and environmental expropriation without end.

The importance of sustaining biodiversity and healthy natural capital assets is clear from SP's work, but the larger-than-human world is discussed in anthropocentric and economic terms. In a background paper on the issue of biodiversity in Canada, SP (June 2011) details ecosystem degradation, habitat destruction, and species extinction as epochal problems at both global and national scale. But for SP, all life on earth holds existential meaning in relation to the human economy, and the human economy is de-historicized

according to what Polanyi (1957) termed the economistic fallacy in which all economic

activity is assumed to resemble market capitalism.

> "Nature, and the many services it provides, is the foundation of life on Earth. It underlies most human economic activity and wealth creation. It supports healthy individuals and communities.
>
> However, humans are now consuming the Earth's natural resources faster than the planet can replenish most of them. This unsustainable use is not only causing an unprecedented decline in biological diversity, it is also wasting a priceless natural asset – one that provides free, life-supporting services in the form of cleaning air and water, renourishing soil, stabilizing climate, pollinating plants, and many others. The value of these ecosystem services can be very high" (SP, June 2011, ii).

The reader may note that nature is not defined as life on earth, but as the services that

provide for human life and wealth creation. SP's anthropocentrism and economism are

not unique to this report. In 2014 an SP report began, "Biodiversity… contributes to

human wellbeing in numerous ways; it provides us with ecosystem goods and services

(like air purification and climate moderation), natural resources for our economic activity,

health benefits, and community and spiritual values" (SP, Feb 2014, 4). Within SP's

ideological model for understanding nature, the cause of biodiversity loss — market

failure — implies its own solution.

The scale of this market failure is acknowledged as monumental. "GHG emissions

driving climate change represent perhaps the most extraordinary market failure in human

history" (SP, Oct 2009). Still, ecological degradation is considered a matter of consumers

and firms responding rationally to that market failure. "At present… markets fail to

incorporate the value of most natural capital, particularly ecosystem services, into

economic decision-making… In short, our economic and ecological signals are misaligned; a major part of our 'balance sheet' (representing nature's value) is missing, leading us to use nature's resources wastefully and unsustainable – much as a tenant who does not pay for electricity tends to leave the lights on" (SP, June 2011, 6). This folksy gibe at the freeloading tenant subtly recalls the tragedy of the commons, first coined as an historical allegory of how self-interest leads to an abuse of collective resources. For SP, this is a story that explains human nature, offering ontological support for its otherwise simplistic plan to include pollution in markets to end environmental harm. "The good news," writes SP, "is that in addressing the challenge of conserving our natural wealth, policymakers have a powerful and proven tool readily at their disposal. Economic instruments… can provide incentives to maintain ecosystems and the services they provide in a cost-effective manner. Such instruments can harness the economic self-interests of individuals, corporations and communities to conserve biodiversity" (SP, June 2011, ii).

Of course, to account for those eco-services previously externalized from market dynamics requires quantifying the value of those services. SP calls this "natural asset accounting" and it is a core function of public institutions in SP's green economy. "This natural asset – our 'natural capital' – requires careful management in order to ensure its benefits are maintained for Canadians now and in the future. However, as the saying goes, 'You can't manage what you don't measure'" (SP, May 2016, 4). In another context, James Scott uses a very similar phrasing to bring attention to how measurement

enables power. "Every act of measurement [is] an act marked by the play of power

relations" (Scott 1998, 27). For SP, this power dynamic of managerialism is not

problematic. The power of state bureaucracy must be embraced and deepened in order to

optimize environmental degradation to ensure an extractive market economy can

overcome the so-called limits to growth. SP lauds the existing efforts by Statistics

Canada to measure natural capital through a variety of research instruments, but equally

implores StatCan to engage in 37 further research activities to enrich Canada's

knowledge of its natural assets (SP, May 2016). These include increasing the frequency of

all existing natural capital assessment tools, expanding what resources Statistics Canada

measures, and compiling monetary service values for ecosystems (SP, May 2016).

The intensification of efforts to assign economic value to Canada's many ecosystems

encounters the dual problem persistent in so much of SP's work — that of verity on one

hand and appropriateness on the other. Recall that ecosystem services was intended as a

metaphor for understanding our dependency on planetary systems rather than a mode of

administrating those systems to maximize our economic gains (Norgaard 2009). To

quantify ecosystems as economic services re-imagines living things through the lens of

bureaucratic and economic functionalism, labeling various natural ecosystems as

differently deserving of existence based on their relative capacity to support or offset

capitalist expropriation and destruction. This is a reversal of the metaphor eco-services,

which is made clear in SP's policy concept of biodiversity offsets discussed below.

Where measurement is an opportunity to solve an ecological crisis according to SP, it is

also an entreatment to have the state coordinate a minimum level of diversity within a

failing complex system. The abstraction of tender geographies into administratively

manageable units is found most plainly in SP's concept of biodiversity offsets.

Biodiversity offsets is a policy tool that allows for continued or intensified environmental

harm in one area so long as another area is developed in the opposite direction, toward

beautification, conservation or remediation. "The concept envisions that the

environmental degradation from the development of one site (the 'development site' or

'impact site') will be compensated for by an equivalent or greater environmental

enhancement on another (usually more or less proximate) site or suite of sites" (SP, Feb

2014). This is the same logic offered by Syncrude for partially funding the establishment

of Wood Buffalo National Park in partnership with the province of Alberta in May 2018.

From Syncrude's (May 15, 2018) press release: "Syncrude's investment provides a land

disturbance offset for future mining development in addition to other commitments to

reduce its environmental impacts. Syncrude's proposed Mildred Lake Extension Project

[in Alberta's oil sands] is currently undergoing regulatory review." While Wood Buffalo

National Park is now the largest national park in Canada and second largest in the world,

the notion of designated conservation spaces adjacent to designated areas of development

is unlikely to provide a long-term solution to biodiversity loss. Jones et al. (2018) found

that over one-third of protected areas are still affected substantially by human extractive

activities. Batllori et al. (2017) show how emergent eco-dynamics from climate change

are transforming whole eco-systems such that any given species may be displaced over

time, plausibly across much larger distances than any conservation space is able to accommodate.

In 2014, SP warns that biodiversity offsets should be considered a last resort to protect the environment from harm during development after avoiding impacts and mitigating impacts (SP, Feb 2014). In 2018, they note that the federal Species At Risk legislation holds that biodiversity offsets adhere to that strict mitigation hierarchy that makes them a last resort (SP, Feb 2018).[29] Nevertheless, SP has not developed reports on regulatory environmental mitigation strategies, but has produced reports on a research agenda for biodiversity offsets (SP, Oct 2014), on the ways in which biodiversity offsets can ensure zero "net" loss of biodiversity (SP, Feb 2014), on using market-based instruments such as offsets to incentivize conservation (SP, June 2011) and on how offsets can support recovery of species at risk (SP, Feb 2018). Recent developments in the offset policy landscape include the design of offset banks where project development firms can pay for biodiversity credits. "Evidence… suggests that banking increases the flexibility and cost-effectiveness of offset policies by mitigating credit price volatility and potential delays in project development" (SP, Feb 2018). But in every case, the offsets pertain only to

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[29] The Species At Risk Act became law in December 2002 and is used in a piecemeal fashion to protect identified endangered and at risk species. Nevertheless, the Species At Risk Act is facing considerable turmoil currently as public estimates suggest remediation to protect caribou will cost as much as $1bn over the next 40 years, as well as will interfere with existing and potential extractive development. Uncertainty persists about whether the appropriate actions will be taken as defined by the Species At Risk Act because of the considerable economic costs for saving caribou. See Derworiz, March 25, 2018. Moreover, in instances in which new developments do not immediately impact the habitat or lives of existing members of an at-risk species, they do not necessarily fall under the Act. Thus, a broader, up-stream approach to species survival is still missing as Canada continues to have the world's highest rate of degrading intact forests, the habitat of caribou (World Resources Institute 2018).

development projects themselves. Downstream harm is not offset, so a tar sands open pit

mine to extract fossil fuels for production, transport, and eventual burning would only be

asked to offset the environmental harm done at the mine site. If a pipeline spills, or

carbon is released into the atmosphere through burning as intended, in accordance with

the neoclassical logics of SP's policy platform, these harms would be managed on the

demand side. By holding the promise of conservation, this offset concept employs the

expertise of administrative model of environmentalism as well as the expertise of

economists so valued by the green economy.

The notion that biodiversity is interchangeable — that one tender geography is equivalent

to another — relies on administrative abstraction. Through natural services accounting,

SP proposes that biodiversity offsets can be optimized to meet some form of equivalency

measured in values of services rendered (that is, in dollars). These services, as noted

above, are defined as those things done by other-than-human natures to support the

particular and historical moment of *homo economicus*, to support the thriving of human

life within a market economy. SP positions Statistics Canada among other public

institutions as responsible for this type of accounting such that biodiversity loss will be an

administrative decision based on a measurement of usefulness.

The administrative abstraction to turn living things into a matter of measurable usefulness

involves a high-modern, technocratic hubris discussed by James Scott (1996) in his

parable about forest management. But such an abstraction is not abstract at the everyday

level. Such management is material and requires innumerable university educated

administrators to assess a monetary value for ecosystem services, to monitor the relative

health of species at risk, to make judgement calls on which systems will be scheduled for

development and which systems will be slated for offsets, to plan and execute

"environmental enhancements" based on best knowledges of how to approximate a

naturally occurring complex system, and more. Every step requires layers of expertise,

decision making, accountability, monitoring, and study. The desire by SP to use this

market-based instrument to ensure environmental protection and to rescue species at risk

relies first on environmental damage to fund remediation elsewhere, and second on the

coordination of experts to see, measure, and manage the land, water, and air according to

the logic of ecosystem services. In every respect, from the concept of measuring

diversity, to the pretense that ecological consequences can be predicted and controlled, to

the belief that the state and scientific experts are the appropriate institutional structures

and agents of global ecological management, the notion of offsets grows out of reified

anthropocentric, capitalistic and statist relations.

A Price on Carbon: Coordinating An Acceptable Denialism

The centrepiece of SP's policy program is demand management, specifically, taxing

carbon to increase the price of emitting. A large minority of SP's papers and reports

reviewed for this study (32 of 118[30]) specifically address the details of carbon pricing and

carbon taxation models. Many others mention carbon pricing as a necessary component

[30] Of the reports listed on SP's site (including those excluded from analysis in this study), 50 of 196
postings are sorted under "Pricing Pollution and Waste" as of May 17, 2018.

of energy transition. Not only does this policy tool undergird SP's transition plan, it is at

the heart of SP's very definition of the problem of climate change. "Carbon pricing, i.e.

internalizing the social cost of emitting carbon into the atmosphere, is the economically

most efficient solution to fixing the environmental externality problem underlying

climate change" (SP, Mar 2015). Importantly for this study, pricing carbon is a

coordinating set of activities for the entry of corporate interests into climate policy,

serving to align the efforts of environmental change-makers with those of carbon

capitalists and high-emissions industries by way of defining practical or pragmatic

change in accordance with corporate survival and profitability. Moreover, the neoclassical

framework of demand management invents an administrative function of choice architect

that rests on an imagined divide between expert social engineers and the reactionary

masses.

In a very early report, SP published the findings of a dissertation on business preferences

for climate change instruments in Canada. This 2010 study found that extractive and

high-emissions firms as well as their industry associations had a distinct and clear

preference for some model of carbon pricing. The Forest Products Association of Canada

(FPAC), Cement Association of Canada (CAC), Canadian Gas Association (CGA), and

Canadian Association of Petroleum Producers (CAPP) were all recorded as in favour of

carbon taxation or cap-and-trade systems (SP, Nov 2010), alongside support from the

Canadian Council of Chief Executives (CCCE), Aluminum Association of Canada (AAC)

and a number of other industry groups that would years later voice their support for Justin

Trudeau's carbon tax announcement via SP's social media platform in October through

November of 2016. Equally, Shell Canada, ConocoPhillips Canada, Suncor, Nexen,

EnCana, Union Gas and Gaz Metro all accepted a price on carbon at an official level,

years ahead of its implementation at the federal level (SP, Nov 2010).

The reason these firms and business associations supported a seemingly costly

environmental tax is clear in SP's work. "Amongst oil companies in this study, there was

a correlation between those who viewed the risks of climate change policy in terms of

[organizational] survival and firms that clearly supported strong action. The industry

leaders on the file perceived climate change policy as potentially threatening the

organization's survival" (SP, Nov 2010, 9). Such a position was stated publicly by

Michael Crothers as discussed above. Carbon industry leaders apparently realized that if

they did not participate in climate change policy, the policy would not include them. This

threatened survival of carbon capital firms, then, leads to the melting of type one, outright

climate denialism and a shift toward type two denial in which transition is slowed and

delayed. Survival could not be ensured by business-as-usual. The state and various

experts were viewed as necessary allies in this risk management and directly recruited as

such.

> "Risk management as a corporate governance practice… attempts to 'manage the
> unmanageable' by putting in place systems and structures to prevent such
> catastrophes (Power: 2004a: 73). Indeed, over the past two decades, the need to

manage 'risk' has led to the expansion of a veritable industry of consultants and scholars aimed at providing structures, often through the means of rudimentary ordinal scoring systems, to assist organizations in determining and mitigating risk (Hubbard: 2009). Governments and professional organizations have also gotten into the game, implementing rules and frameworks to impel firms to adopt these 'best practices'. The Sarbane-Oxley legislation in the US and the international Basel II accords for the banking industry provide perhaps the best examples of this phenomenon (Power: 2004b). These legislative changes have transformed risk management from a practice into a regime, increasing its significance in all areas of corporate decision-making" (SP, Nov 2010, 8).

Indeed, profitability and firm survival appear deeply interconnected in high-emission industries choosing to support SP's carbon tax plan. Under SP's plan, the focus on demand management at a consumer level intends a revenue-neutral application of a carbon tax via personal and corporate income tax cuts. This shift in the tax structure also signals an intended slow decline in government tax revenue as price signals are meant to curb domestic demand. The potential for higher prices to affect demand and thus spark an energy transition through consumer power remains contingent and uncertain, however.

The level at which carbon taxes will affect consumer behaviour is a point of contention in even SP's own work and certainly outside of it. Early on, SP established $100/t CO2e (tonne of carbon dioxide equivalent) as the "minimum price necessary to drive the technological and behavioural changes required to substantially reduce emissions" (SP, May 2011, 5). Within just a couple of years, BC's existing carbon tax, which moved from $10/t to $30/t, was celebrated by SP as the cause of a 19% reduction in per capita fuel consumption (SP, July 2013). Marc Lee (2016) of the CCPA argued that BC's apparent

emissions success was a matter of circumstance as BC's per capita emissions were

declining well before the tax was created and broader issues of economic downturn

confounded any price-based assumption of carbon tax effect. Worse, a model reported by

the Conference Board of Canada and The Canadian Academy of Engineering (2017)

predicted that if carbon taxes were to reach $200/t by 2025, this would only result in a

1.5% reduction in GHG emissions outside the energy production sector, undermining the

consumer demand model at the heart of SP's social change analysis. At this $200/t figure,

SP quotes the David Suzuki Foundation and Pembina Institute in saying that tax revenues

would reach $50bn per year — all paid by fossil fuel users, not the emitters themselves.[31]

While SP pays close attention to using tax revenue to make this user-fee tax less

regressive through spending on poverty reduction (SP, May 2011b), as well as spending

to mitigate interregional wealth transfers and support trade exposed sectors (where global

competition threatens Canadian industry) (SP, May 2009), its plan also mandates revenue

neutrality via a reduction in what they term "distortionary" taxes on corporations and

individuals. As such, SP's plan to use refunds and benefit payments to ease the burden of

user-fees on low-income households raises questions about spending priorities that are

not addressed.

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[31] Economists may protest that those industries with elastic products will likely have to absorb at least
some of the costs of this tax, rather than pass them along to consumers. That does not change the fact that
the price is intended in design and philosophy to be a demand-side managerial strategy.

SP's paradigm understands climate change as a massive market failure that has led

economically rational actors to destroy the environment when they would rather not. The

correction of that failure — and thus of environmental antagonisms — comes in the form

of pricing market products and services at a rate that includes their full environmental

cost, but also in the form of shifting the tax system away from wealth redistribution.

Neoclassical economics (as well as neoliberal economics) holds that individual and

corporate income taxes (among other forms of tax) distort the supply and demand

balance, preventing the market from finding the optimally efficient price, interrupting the

flow of wealth and ultimately leading to market imbalances. Further policy to mitigate

poverty aside, this plan follows several decades of neoliberal tax shifts that place the

burden of paying for social services and the growing apparatus of bureaucratic

democracy on users while reducing taxes on corporations and high-income earners as

incentives for private investment, luxury consumer spending, and job creation (Carroll

and Little 2001).

In stark contrast to its ideological claims, neoliberalism's user-based tax scheme has led

to a massive increases in unproductive capital in the world. Where in 1970, 90% of profit

was re-invested, 30% is being re-invested today with the remainder being held as private

wealth (Oxfam 2017). At a policy level, SP argues that a tax-and-spend approach to

making that capital productive in the global economy is ineffective compared to a

financial capital model of selling debt so that private investors can earn further profit

from investing that otherwise unproductive capital. The opportunity for radical policy at

this intersection of inequality and climate mitigation is significant.

Many environmentalist change makers may hold hope that internalizing the

environmental cost of a global, carbon-intensive economy will lead to re-organization.

But the fallacy of demand management means that intersecting issues of affordability in

Canadian cities will likely disrupt emissions reductions from carbon taxation. Housing

crises have struck every Canadian city in recent years as global consumer capital has re-

organized the housing development industry toward the extreme profits of a luxury

market (Cox and He 2016). Child care costs have become unmanageable (Macdonald and

Friendly 2017) at the same time as Canadian families are working more hours than they

have in decades (Marshall 2009). Economic centralization has intensified urbanization

for Canadians, as well (Albo and Fanelli 2018), and increases in extreme weather make

heating and cooling a matter of public health in many parts of the country (Public Health

Agency of Canada 2017). An increase in user-costs for transported food, automobile use,

heating and more will be a competing priority in a country where citizens already have a

record consumer debt-burden (The Canadian Press, March 12, 2018). But critically, the

problematic of the carbon tax is not found in whether it will be effective at curbing

carbon demand and initiating an energy transformation, but in how this idea has worked

to capture progressive actors and align environmentalism with the interests of carbon

capitalism.

Smart Prosperity gains considerable legitimacy through its association with non-corporate, civil society partners, including a number of progressive social change organizations such WWF Canada, the Broadbent Institute, Pembina Institute and Natural Conservancy of Canada. Despite the many ontologically and academically troubling aspects of SP, this legitimacy across a multi-sector panel of respectable public figures and institutions insulates the organization and its problems from penetrating critique. The question of why so many well-intentioned, intelligent, capable people are involved with Smart Prosperity is most meaningfully answered in the idea of the carbon tax. In just one decade, staunch opposition to Canada's tar sands and other extractive industries by these same change-making organizations was transformed into a collaboration for long-term transition planning. Putting a price on air (charging for the right to pollute) became almost universally accepted as a model for planetary survival. It is precisely because of denialism, corporate obstructionism, and state coercion that more radical measures, which might have threatened the carbon industry's survival, were pushed to the margins. Pragmatism and realism are now entangled in coordinating texts about a future that ensures the corporate survival and profitability of domestic oil companies. Pricing pollution is meant to function as demand-management, but also serves to draw the state into a familiar role of risk mitigation for carbon futures, entwining public revenue with the continued existence of pollutions to tax. Building bitumen pipelines is accepted as necessary to achieve investor stability and to fund infrastructure for a non-carbon

economy. The issue of carbon energy itself — why we use so much, how life might function without it — is excluded from a set of ideas that espouse nature as the support system of an always-already existing market economy and which exclude any notion (historical or futurist) that a human economy could function differently.

Pricing Pollution to End It

Through an analysis of Smart Prosperity's policy program, this study has elucidated the
intersection of our everyday sense of the given and the construction of choice that
underlies it. Smart Prosperity's neoclassical demand-management environmentalism
subtly positions its minions as architects of a regime of individuating, consumer choice-
based energy transition. Their ontological orientation reduces all of nature to its function
as the living support system of human wealth creation, and further de-historicizes
capitalist market economics to assert an always-already existing inherent relationship of
expropriation between humans and their eco-systems.

Where Gowdy and Erickson (2005) note that policies developed from neoclassical
economic principles of rational actor theory, value monism, and margin cost analysis face
a crisis because of climate change, their optimistic suggestion that economic policy
models would adapt seems inaccurate in Canada's case. Instead, as Richard B. Norgaard
(2009) warned, ecological services has grown from an allegorical metaphor into a
genuine attempt to simplify and manage the complexity of our planetary ecology
according to rationalized models of consumer behaviour. While speaking broadly and
somewhat cynically about the global movement toward pricing carbon, Bailey, Gouldson
and Newell (2011) incidentally laid out much of SP's policy ideals for Canada as well.
"For international bodies and governments, [carbon prices] offered a way of meeting
commitments to cut greenhouse gases without sacrificing other policy goals; for emitting

industries, they provided a 'least-worst' option for managing the risks of regulation and the commercial risks associated with climate change; and for market intermediaries and speculators, they have created new commercial opportunities" (Bailey, Gouldson and Newell 2011, 697). Still, most importantly, this study has sought to push beyond the appropriateness of neoclassical environmental economics as a model of statecraft, to examine how objectifications of abstracted reality come to organize our continued alienation from the larger-than-human world and our own tender geographies of self, place, and community.

The growing field critiquing ecological modernization and other market-based environmentalisms needs the detailed interrogation of the ideological and ontological underpinnings of such policy programs that this study provides. As well, this study answers a need for "in-depth studies on how system and regime structures are created and changed through the strategic interplay of different types of actors" (Markand, Raven and Truffer 2012, 962). While confirming and building on existing critiques, my institutional ethnographic approach has opened important questions about the appropriateness of bureaucratic expertise in reducing ecological harm and creating sustainable futures. By examining the ontological, structural, and relational consequences of Smart Prosperity's neoliberal ecological modernization, this study has drawn attention to how a coordinating set of administrative logics taken up and acted out by a variety of well-intended social actors opens the process of energy transition to corporate obstructionism and privatization.

Smart Prosperity's policy program of "clean growth" involves extending the viability of Canada's high-emissions industries through slowly shifting demand for extracted resources from a domestic to international market. But its strategy is not solely measurable as a matter of policy or economy. Smart Prosperity also proposes that Canada foster a psychology of domination over nature, an infrastructure of alienation, and a political economy of limitations and technocracy (though not in those terms). Problematic in Smart Prosperity's vision is an abiding faith in neoliberal solutions to problems unique to the capitalist market ecology. Smart Prosperity insists on the coherency of economy and ecology and interprets an extinction-threatening ecological disaster as a problem of market failure. While SP might be open to a critique of (in)sufficient response to our environmental disasters, its market-based ideology frames out the possibility that economic administration of nature invites further catastrophe. Capitalism not only (re-)generates a fundamental metabolic rift between human activities and nature (Foster 1999), it is constantly re-made through these relations of organic alienation (Moore 2011). David Harvey reminds us that the cooptation of environmentalist language and the enfolding of further natural frontiers — in this case, air as both pollution-holder and energy-maker — into capitalist markets comprise a time-tested mode of displacing the limitations to capital posed by environmental crisis (Harvey 2014, 246-250). The innovative future proposed by Smart Prosperity is one of further investment in

the infrastructure of environmental degradation and of human disengagement and alienation (Huber 2013, 159).

This study also adds to the consideration of how the well-intentioned, well-educated, and well-positioned can participate in generating harm. Our everyday activities can become entangled with global capitalism through a coordinating apparatus of textual relations. Knowledge and rules become reified through claims of objectivity and abstract pragmatism. Dorothy Smith articulates this as ideological thinking, in which our understanding of the world remains abstracted. Smart Prosperity carefully constructs a very tidy abstracted world in which prices directly affect choices, the aggregation of those choices changes our economy, and our economy can grow without growing our ecological impacts. Just as importantly, Smart Prosperity also constructs an abstracted world in which crisis must be managed.

One of the important insights from this study is that administration of crisis is constrained by the politics of measurement and the ideological constraints placed on the possible. This follows the insights of James Scott regarding "the dangers of dismembering an exceptionally complex and poorly understood set of relations and processes in order to isolate a single element of instrumental value" (Scott 1998, 21). Climate change is an exceptionally complex set of relations precisely because

it unfolds, all at once, from countless ecosystems, larger than human communities and families, and the tender geographies of our human existence.

Thus, the very premise of ecological services administration is flawed. Even if ecological services could be perfectly measured and codified, the premise from which they emerge reflects a rift from our organic relations with nature as geographies that constitutes us. If we are what we eat, we are where we live, our bodies are made functional by our microbiomes and nutrient cycles that involve countless inter-species relations, then to categorize our external geographies according to services is to do likewise with our internal services, returning to the alienation of our very species-being. Further, administering our ecosystems blinds us to ways that the larger-than-human world exists completely independently of our needs. Nature is not a matter of human economics; human economic relations occur within nature. Thus, continued human exceptionalism and the reduction of the larger-than-human systems integral to our species-being to a functional reality is destructive of our existential self.

It is, of course, important to consider the many alternative readings of Smart Prosperity's policy program as well as the limitations of this study. A key limitation of this study that could alter how we understand Smart Prosperity's intentions is a lack of qualitative field work. The question of how extra-local relations come to be taken up by the authors of these reports, or by those joining Smart Prosperity as corporate or civil society endorsers begs examination. Given decades of traditional

climate denialism and centuries of environmental destruction under industrial

capitalism, a more generous reading of SP's work might find that environmentalism

of any type is a welcome respite and hopeful opportunity for continued change.

This issue of practical change over idealism may play a part in Smart Prosperity in

a number of ways that remain unexplored. In traditional cases of greenwashing, the

concern is that a civil society group has either been created or captured to espouse

corporate preferences. In the case of Smart Prosperity, it seems that corporate and

policy partners found Smart Prosperity's business-friendly carbon pricing message

increasingly attractive as the regulatory risks grew. In this way, Smart Prosperity's

policy plan may represent an opportunistic corporate survival strategy. The

practical and opportunistic dimensions of a growing policy-oriented research group

may further entwine with precarity for academics, as well. As individual academics

and graduate students seek funding and legitimacy alongside meaning and purpose,

they are also increasingly required to apply their work to policy and industry

bodies. NGOs in Canada have faced a similar constraint since the Harper

government outlawed so-called political charity work. Further research may reveal

a confluence of coercive pressures among Smart Prosperity's many stakeholders

toward a viable, tractable, policy-focused and business-friendly model of

environmental change. Further research may elucidate these internal dynamics and

add insight into the process of generating their expert texts. Lastly, as the Smart

Prosperity model taken up by Justin Trudeau's federal Liberals faces increasing

opposition from a wide variety of communities (both geographic and political), a

research opportunity is emerging to conduct grounded fieldwork on the experience

of imposition and coordination toward the so-called green economy.

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