The paradox of growth and the promise of unsettled times: Canadian politics of the economy and the environment 1867-2017

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Abstract

Why does economic growth persist as a primary policy objective of nation states that is pursued and overwhelmingly supported? Accumulating evidence indicates that after a certain point economic growth does not contribute to social wellbeing, and undermines global ecological integrity. The persistence of economic growth as a primary policy objective is a paradox. This paradox is an important research gap that demands explanation. Explaining this paradox is important because, unless we are able to explain why growth persists, policies cannot enable humanity to live in harmony with this finite Earth.

The overarching purpose of this thesis is to explain the paradox of growth in Canadian federal politics. The study has four specific objectives: (1) to map the dominant belief system in Canadian federal politics 1867-2017, and show how the persistence of economic growth as part of that system is a paradox; (2) to develop a conceptual framework to understand how society and nature coevolve, and the role of belief systems in that coevolving relationship; (3) to use this framework to explain the persistence of economic growth in Canadian federal politics; and (4) to identify barriers and opportunities for how Canada can move towards an ecologically sustainable economy and ways of life.

First, I use Canadian political manifestos (party platforms) to map the dominant belief system in Canadian federal politics 1867-2017, and to show how the evolution of ideas about economic growth and the environment is a paradox. This part reveals a surprising result: that Canadian political leaders have questioned growth much more than was previously thought, especially under the tenure of P.E. Trudeau during the 1970s.

Second, I propose and develop a coevolutionary explanation for the paradox of growth in Canadian politics. I propose the novel Emergent Coevolutionary Framework, an integrative way to understand society-nature relationships that is grounded in critical realism. Next, I demonstrate in detail how this conceptual framework explains the story of growth in Canadian politics as a coevolutionary sequence of settled and unsettled times.

Third, I provide a deeper analysis of settled and unsettled times to identify how Canada can move towards an ecologically sustainable economy and ways of life. Using extensive archival sources, I analyze Canadian politics of the environment and the economy during the critical period 1970-1982 as an example of an unsettled time. I show how Canada was at the forefront of environmental thinking and action in the 1970s, and identify the barriers and

opportunities to change in unsettled times. Finally, drawing on elite interviews in Canadian environmental politics, I argue that Canada's failure to take more ambitious action on the environment since the 1970s can be explained by the structural constraints of the dominant system during a settled time.

This thesis makes important contributions, both to integrative theory in the environmental social sciences and to identifying practical strategies to overcome the growth dilemma. Importantly, the strategies that will be most effective are different depending on whether we are in settled or unsettled times. Ultimately, this research helps to understand the barriers to and opportunities for the transformations needed for humanity to live within the finite limits of the Earth.

Résumé

Pourquoi es-ce-que les états-nations poursuive t'elle en majorité écrasant la croissance économique en tant qu'objectif politique principal? De plus en plus de recherche scientifique indique qu'après un certain point, la croissance économique ne contribue pu au bien-être social et nui à l'intégrité écologique mondiale. La persistance de la croissance économique comme objectif politique principal dans un temps de crise écologique est un paradoxe. Il existe une lacune de recherche a ce paradoxe qui nécessite des explications. Il est important d'expliquer ce paradoxe car, à moins que nous ne puissions expliquer pourquoi la croissance persiste, les politiques ne permettrons pas à l'humanité de passer au-delà la croissance économique et de vivre en harmonie avec les moyens écologique de la Terre.

Le but fondamental de cette thèse est d'expliquer le paradoxe de la croissance dans la politique Canadienne. L'étude a quatre objectifs spécifiques: (1) cartographier le système de croyances dominant dans la politique Canadienne de 1867 a 2017 et montrer comment la persistance de la croissance économique dans le cadre de ce système est un paradoxe; (2) développer un cadre conceptuel pour comprendre la coévolution de la relation entre notre société et la nature, et le rôle des systèmes de croyance dans cette relation; (3) utiliser ce cadre pour expliquer la persistance de la croissance économique come objectif dans la politique Canadienne; et (4) identifier les obstacles et les possibilités pour le Canada de progresser vers une économie et des modes de vie écologiquement durables.

Premièrement, j'utilise des manifestes politiques Canadiens (plateformes de partis) pour cartographier le système de croyance dominant dans la politique Canadienne de 1867 a 2017, et pour montrer l'évolution paradoxal des idées sur la croissance économique et l'environnement. Cette partie révèle un résultat inattendu: les dirigeants politiques canadiens ont remis en question la croissance beaucoup plus qu'on ne le pensait auparavant, surtout sous le mandat de P.E. Trudeau dans les années 1970.

Deuxièmement, je propose et développe une explication coévolutionnaire du paradoxe de la croissance économique dans la politique Canadienne. Je propose le nouveau Cadre de Coévolution Émergente, une façon intégrative de comprendre les relations société-nature qui repose sur un réalisme critique. Ensuite, je démontre en détail comment ce cadre conceptuel

explique l'histoire de la croissance économique comme system de croyance dans la politique canadienne comme une séquence coévolutionnaire entre temps sédentaires et temps instables.

Troisièmement, je présente une analyse plus approfondie des périodes stables et instables pour déterminer comment le Canada peut évoluer vers une économie et des modes de vie écologiquement durables. À l'aide de nombreuses sources d'archives, j'analyse la politique canadienne de l'environnement et de l'économie au cours de la période critique 1970-1982 comme exemple d'une période instable. Je montre à quel point le Canada était à l'avant-garde de la pensée et de l'action environnementales dans les années 1970, et j'identifie les obstacles et les possibilités de changement en ces temps instables. Enfin, en m'appuyant sur des entrevues d'élite dans le domaine de la politique environnementale canadienne, je soutiens que l'échec du Canada à prendre des mesures plus ambitieuses en matière d'environnement depuis les années 1970 peut s'expliquer par les contraintes structurelles du système dominant pendant une période stable.

Cette thèse apporte d'importantes contributions, à la fois à la théorie intégrative des sciences sociales de l'environnement et à l'identification de stratégies pratiques pour surmonter le dilemme de la croissance. Il est important de noter que les stratégies qui seront les plus efficaces diffère entre les époque stable ou instable. En fin de compte, cette recherche aide à comprendre les obstacles et les opportunités pour les transformations nécessaires à l'humanité pour vivre dans les moyens écologiques de la Terre.

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Chapter 1: Introduction

The Enlightenment roots of growth and the unravelling of modern assumptions

Economic growth as a primary policy objective is relatively recent. Prior to the eighteenth century, the dominant view was of the world and the human condition as static and unchanging (Lovejoy 1964). The modern conception of economic growth originated in Britain as the idea of material progress, along with emerging and complex currents of Enlightenment thought that aspired to ideals of reason, science, and a universal human knowledge. With industrialization, living standards substantially improved within a single lifetime, such that by the mid 1700s material progress became perceptible, and consequently a public expectation. As the static view of the world was replaced with expectations that future conditions would improve compared to those of the past, ideas such as 'development' and 'progress' became increasingly popular in Britain, and rapidly spread to the rest of Europe by the end of the nineteenth century. From the end of the nineteenth century until the Second World War, economists largely did not care about growth (Schmelzer 2016). As economic historian Heinz Arndt observes, "hardly a line is to be found in the writings of any professional economists between 1870 and 1940 in support of economic growth as a policy objective" (1984, p13).

Since the 1940s, economic growth has become the primary way countries measure the prosperity of their economies and compare between them. Economic growth is defined as an annual increase in the total monetary value of economic exchanges within a given country. It is typically measured as gross domestic product (GDP), where GDP is a measure of all the goods and services produced in a country over a given period.[1] Economic growth (per capita) is used synonymously with prosperity, and is treated as a panacea for diverse social objectives including employment, social wellbeing, security, and protection of the environment.

In one sense, the Enlightenment project of perpetually improving the human condition through science, technology, and control of the natural world has worked. By many metrics, the human condition has improved: life expectancy has increased; healthcare has improved; famine, hunger, and undernourishment have declined; extreme poverty has declined; and peace and

[1] There are three ways of calculating GDP that in theory give the same result: the production approach, the income approach, and the expenditure approach. Thus, an increase in GDP is often used synonymously with an increase in national production, income, or spending.

security have increased (Pinker 2018). From the vantage of New Optimists such as Stephen Pinker, humanity has never had it better.

A closer look at economic growth and human wellbeing reveals that the notion of continued progress is illusory. The driving assumption behind the pursuit of economic growth is that it will directly improve the wellbeing of a nation. For the least developed countries, increased GDP typically does correlate with higher levels of wellbeing. However, this assumption is severely limited. Empirical studies have challenged the assumption that increased GDP improves wellbeing for all levels of development, showing that in the most developed countries it does not significantly improve wellbeing (Easterlin 1998). Once nations have achieved certain material living standards (per capita GDP), increases in GDP show diminishing gains in wellbeing, and for the wealthiest nations the correlation between GDP and wellbeing is negligible.[2] The key message is that growth beyond levels that satisfy basic needs does not significantly improve wellbeing. The promise of the Enlightenment project to deliver perpetual progress is unravelling, and with it the assumption about a growth-oriented vision of prosperity.

Questioning unlimited growth on a finite planet

Even more troubling, the Enlightenment project wove a web of relationships between humans and nature that fundamentally undermines the stability and integrity of the Earth's systems on which humans depend for our wellbeing. Even as many metrics of human wellbeing have improved, these gains have come at an ecological cost. Over the last 150 years, humans have overwhelmed Earth's systems through exponential increases in population, production, consumption, urbanization, industrialization, transportation, and many other facets of human activity (Steffen et al. 2015). The impacts of human activity are destabilizing Earth's systems through climate change, ocean acidification, biodiversity loss, soil loss, desertification, and deforestation (Steffen et al. 2015). There is a fundamental incompatibility between the continued integrity and stability of Earth's systems and the current way of organizing society-nature relationships (O'Neill et al. 2018). If these ways of organizing society-nature relationships continue, there is a potential that the Earth system could be pushed past a planetary threshold,

[2] The Easterlin Paradox is the counter-intuitive observation that, while at a point in time (i.e. in the very short term) wellbeing appears to increase with GDP in all countries, in the long term (i.e. 10 years) wellbeing does not increase with GDP for developed countries.

making Earth irreversibly inhospitable for civilization as we know it (Steffen et al. 2018; Wallace-Wells 2019).

At the center of this web of relationships lies economic growth. Economic growth captures the holistic relationship between human societies and the environment that has dominated and led to the current ecological crisis. For ecological economists, the economy is embedded in and limited by the Earth's systems, which make up a finite and non-growing whole. Economic growth increases energy and material flows, as well as wastes produced, which encroach and place pressure on Earth's systems (Daly and Farley 2011). As the economy encroaches on those systems, human activity diminishes nature's ability to support life. Economic growth, combined with rising population and use of technology, is resulting in ecological degradation and increasingly dire predictions of future conditions. This is especially true for many of the most developed regions (North America, Australia, Western Europe, and Japan), which have reached the point where growth is no longer economic (Alexander 2012).[3] Indeed, Peter Victor (2019) shows that we have filled up many of the sinks (especially greenhouse gases) and are degrading many systems such as forests, fisheries, and fresh water, upon which continued human flourishing depends.

Given that it threatens to destabilize Earth's life support systems, continued economic growth is deeply at odds with a desirable future for humanity and non-human life. The standard economic assumption of unlimited growth does not account for the fact that the economy is embedded within and dependent upon Earth's finite systems (Daly and Farley 2011). Moreover, GDP is unable to account for environmental degradation because it only measures the flows of resources, but not the environmental stocks and sinks that are used up and degraded by economic activity. We must limit energy use, material throughput, and waste production if we wish to avoid permanently or irreversibly depleting resources, destroying ecological services, and filling up environmental sinks. In the face of the ecological crisis, there is an urgent need to transform the ways society relates to nature, and the pursuit of economic growth in particular.

[3] When the costs of growth exceed its benefits, growth becomes uneconomic (Daly and Farley 2011). There is an optimal scale of the economy relative to the Earth's systems beyond which further growth is no longer economic. Globally, we have reached and likely surpassed this optimal scale.

Wishful thinking: reasoned argument and the persistence of growth

The environmental research and policy communities generally assume that if flawed ideas are continually challenged and undermined they will be discarded. Yet this Kuhnian assumption, that undermining a paradigm through logical and moral arguments will lead to a shift, does not hold. For over half a century GDP growth has been criticized as an inadequate measure of human wellbeing and progress, and a litany of myths justifying GDP have been proven false (Coscieme et al. 2019). Proponents of economic growth have made several main arguments for why economic growth is compatible with protecting the environment, and all of them have been disproven.

Ecomodernists claim that economic growth can be decoupled from its impacts, such as energy and material throughput and waste production (Asafu-Adjaye et al. 2015). If these impacts could be reduced to harmless levels through increased efficiency, then economic growth would no longer be a problem for the environment. Based on this rationale, ecomodernists argue that economic growth and environmental protection are compatible rather than at odds with one another. They point to empirical observations that in some instances the relationship between per capita income and environmental pressure followed an inverted U-shaped curve, a correlation known as the environmental Kuznets curve (EKC). This curve was thought to indicate that environmental impact increased with increasing income (i.e. GDP) up to a certain point, but after that point, increasing income correlated with declining environmental impact. However, evidence that economic growth leads to improved environmental quality applies to only certain local, short-term pollutants, but not for stocks of waste or long-term pollutants such as CO_2 (Arrow et al. 1995). Indeed, inverted U-shaped correlations most often model the relationships between income and a few specific pollutants such as sulfur dioxide and urban air pollution. In many other cases pollution increases apace with income levels, and for others N-shaped curves show that increasing income may correlate with some degree of decreased environmental impact, but then even further increases in income lead to further throughput and environmental impact. Importantly, carbon emissions tend to increase with income, and in lockstep with energy consumption. While the EKC may hold for some issues such as air pollution, it does not hold for many other issues such as climate change and species extinction. Thus, while the EKC is evidence that growth correlates with improved environmental quality in some specific cases, it is not evidence that decoupling will happen in all cases, or quickly enough to prevent irreversible

global harm. In other words, the EKC is so severely limited that it offers no meaningful promise that economic growth can be decoupled from major environmental impacts such as climate change and biodiversity loss.

Closely related, technological optimism is the faith that humanity can develop ever more efficient technology so that increases in efficiency will decouple growth from environmental impacts. Efficient use of energy and materials is undeniably important, but techno-optimists often fail to distinguish between relative and absolute decoupling. Relative decoupling refers to efficiency gains per unit GDP, while absolute decoupling is a reduction in the total human impacts on Earth's systems. For efficiency gains to have the promised effect, they must result in not only relative, but also absolute decoupling. As Peter Victor (2019) shows, however, absolute decoupling becomes extremely difficult with continued economic growth. Relying on improvements in technological efficiencies alone, without addressing continuing economic growth, efficiency gains have to reduce per capita impacts more than increases caused by economic and population growth combined. This is not a mere technicality. While there is evidence for relative decoupling in some sectors, absolute decoupling has not occurred because efficiency gains have been insufficient to counter increases in population and per capita GDP (Jackson 2009). Relative decoupling occurs, but without absolute decoupling. Thus, while technological innovations and greater efficiencies are crucially important, the ever-increasing production and consumption of growth must also be addressed.

Finally, proponents of growth claim that, according to the Porter Hypothesis, economic growth and environmental protection can be made compatible through regulation (Porter and van der Linde 1995). The Porter Hypothesis is used to argue that there is no trade-off between economic growth and environmental protection because environmental regulation can stimulate innovations that lead to increased efficiencies (van Leeuwen & Mohnen 2017). This is the assumption behind the idea that economic growth and carbon pricing are compatible. However, similar to the idea of decoupling, studies have only confirmed a weak version of the Porter Hypothesis, but not the strong version. Regulation can reduce the degree that growth impacts the environment, but the claim that no trade-off exists between economic growth and environmental protection has not been confirmed (van Leeuwen & Mohnen 2017). While regulation can help protect the environment, the Porter Hypothesis does not provide a strong claim that economic

growth can persist while protecting the environment. In every instance, arguments that economic growth can and should continue without harmful ecological impacts cannot be sustained.

The Paradox of Growth

While ecological economists and environmental social scientists have long identified what is wrong and why, growth persists and is actively pursued. Economists, policy makers, the mainstream media, think tanks, and politicians continue to call for unconditional economic growth. Indeed, commitment to growth holds tremendous legitimacy among all major actors and is "so transparently normal that its presence, character and consequences rarely provoke critical scrutiny" (Purdey 2010, p8). Even in the face of accumulating evidence, economic growth continues to be demanded, advocated for, and pursued as a primary policy objective of nation states.

The persistence of economic growth as a primary policy objective is a paradox. In the face of evidence that, after a certain point, economic growth is uneconomic, does not contribute to social wellbeing, and undermines ecological integrity, why does it persist as a primary policy objective that is pursued and overwhelmingly supported? This paradox is an important gap in the literature that demands explanation (van den Bergh 2009; Kallis et al. 2012; Schmelzer 2016). Explaining this paradox is important because, unless we are able to explain why growth persists, policies cannot enable humanity to live in harmony with this finite Earth.

Research question and objectives

The question this thesis seeks to answer is:

How can the paradox of growth be explained in Canada? Why does economic growth persist as a primary policy objective despite overwhelming rational and moral arguments against the continued pursuit of growth?

The overarching purpose of this thesis is to explain the paradox of growth in Canadian federal politics. Causal explanation is typically formulated in terms of causal mechanisms that produce a phenomenon: "A mechanism for a phenomenon consists of entities and activities organized in such a way that they are responsible for the phenomenon" (Illari and Williamson

2012, p120). Explanation involves three steps (Illari and Williamson 2012): (1) identifying the phenomenon, (2) identifying the relevant entities and activities, and (3) describing the organization of the entities and activities that produce the phenomenon.

The objectives of this research correspond to these three steps, and add a fourth objective to explore the implications of the proposed explanation. These four specific objectives are:

1. To map the dominant belief system in Canadian federal politics 1867-2017, and to show how the persistence of economic growth as part of that system is a paradox;
2. To develop a conceptual framework to understand how society and nature coevolve, and the role of belief systems in that coevolving relationship;
3. To use this framework to explain the persistence of economic growth in Canadian federal politics; and
4. To identify barriers and opportunities for how Canada can move towards an ecologically sustainable economy and ways of life.

Research context: explaining the paradox of growth in Canadian federal politics

Canada is a unique case study to interrogate the paradox of growth (Yin 2003; Small 2008). Logical and moral arguments against growth apply most strongly to countries such as Canada. For developed countries, beyond a certain material and energetic threshold, growth no longer significantly contributes to wellbeing (Easterlin 1998). Hence, ecological economists have argued that the most wealthy developed countries should pursue degrowth as their path towards a sustainable economy (Victor 2019). Canada is also among the countries most culpable for the global ecological crisis. Canada has championed the growth-based status quo of neoliberal capitalism (Bousfield 2013), and Canada's resource- and energy-intensive industries are responsible for high per capita greenhouse gas emissions. Canadians have benefitted from high consumption, production, and wastes. Thus, there are both practical and moral reasons for the wealthiest countries such as Canada to pursue alternatives to growth.

Canada also has a disproportionate capacity and potential for change. Canada holds a privileged position in that it has disproportionate means and ability to pursue alternatives to growth. Degrowth towards an eventual steady state economy (SSE) may be most manageable in countries with plentiful resources, robust social services, and low population. Canada also has significant influence, while not being constrained by the geopolitics of a global superpower.

Canada is involved with dominant international spheres such as the OECD, the G8, and the World Economic Forum, and has historically held a strong moral position on issues such as peace, development, and the environment.

At the same time, tensions and contradictions between economic growth and the environment are pressing and explicit in Canada. Environment and Climate Change Canada's (ECCC) report on greenhouse gas (GHG) emissions projections, identifies economic growth as a key driver of emissions (ECCC 2018). Although improvements in technological efficiency may reduce the relative amount of GHGs emitted per unit of growth, more economic growth means more GHG emissions in absolute terms. Moreover, ECCC recognizes economic growth as a "key risk" that could impede Canada's ability to achieve emission reduction targets (ECCC 2017):

> Population, industrial and economic growth may continue to put stress on the environment, which may impact the ability of the Department to conserve nature and to prevent and manage pollution (ECCC 2017).

Still, the Canadian government explicitly pursues growth, even in the context of the environment. For instance, the government's main environmental policy is entitled *The Pan-Canadian Framework on Clean Growth and Climate Change: Canada's Plan to Address Climate Change and Grow the Economy* (ECCC 2016). Similarly, the recent Speech from the Throne declared that the Government "will continue to protect the environment and preserve Canada's natural legacy. And it will do so in a way that grows the economy..." (Governor General of Canada 2019, p5). Paradoxically, the Canadian government explicitly recognizes that economic growth drives GHG emissions, while at the same time promising climate action that will grow the economy.

Finally, this research reveals historical results in Canadian politics that make the paradoxical persistence of growth even more surprising and difficult to explain. During the critical period the 1970s, Canadian thinkers and politicians were at the forefront of discussions about the economy and the environment, including critiques of economic growth. For instance, as early as 1969, leading Canadian politicians and public servants interacted with the Club of Rome, and continued to do so throughout the 1970s (Doern and Conway 1994). As we will see in later chapters, these meetings and support involved Prime Minister P.E. Trudeau, and reveal the surprising extent to which Canadian leaders once considered environmental ideas including critiques of growth. Likewise, Robert Stanfield and his Conservative party engaged with these

ideas much more than previously thought. This evidence means that Canada provides one of the most rigorous cases available to test explanations for the persistence of economic growth in the face of compelling evidence that alternatives should be pursued.

Research design and methods

This thesis is organized into three parts, with two chapters in each part. Part I presents the main empirical argument of this thesis, demonstrating the phenomenon, the persistence of growth. Part I is composed of Chapter 3, which maps the dominant belief system in Canadian politics, and Chapter 4, which documents the paradox of growth. Part II presents the main explanatory argument of this thesis, describing the processes needed to explain the persistence of growth in Chapter 5, and then showing how those processes came together to produce the story of growth in Canadian politics in Chapter 6. Part III moves beyond explanation to explore the implications of this explanation for the prospects for change in Canadian politics, and is composed of Chapters 7 and 8.

Part I: The paradox of growth in Canadian federal politics

Part I develops the main empirical argument of this thesis. I use Canadian political manifestos (party platforms) to map the dominant belief system in Canadian federal politics 1869-2017, and to show how the evolution of ideas about economic growth and the environment is a paradox.

According to a complex systems view, belief systems are constellations of emotionally charged concepts that emerge from networks of people and their social and material worlds (Homer-Dixon et al. 2013). Rather than emphasizing that ideas are constructed and historically contingent (Parkins et al. 2015) or the power inequalities involved (Abercrombie and Turner 1978; Dunlap 2008), a belief systems perspective recognizes that belief systems emerge from and coevolve with social and natural systems.

While there may be multiple, overlapping belief systems held by different groups in society, dominant belief systems have societal influence, take precedence over alternative ideas, and are enduring. First, whether dominant belief systems are pervasive or are held primarily by elites, they have societal influence. They shape the way people see, understand, and navigate the world. Second, dominant belief systems are not only pervasive but also take precedence over

other ideas to drive decisions, actions, and ways of being of society as a whole. Third, they are relatively persistent and enduring.

Political party platforms provide a window into the dominant belief system – the zeitgeist of the time. Politicians and political parties develop manifestos with the electorate in mind. As such, they represent the dominant thinking with attention to what is happening in society, including major sentiments, problems, events, aspirations, needs, narratives, and values. At the same time, party platforms do not simply reflect the context and way society is; they aspire to change it. Platforms are a dynamic part of the struggle to define, mould, and change society as society evolves and navigates its socio-political context and physical environment. Parties may even provide leadership, pushing beyond dominant beliefs, providing policies, visions and values that question or challenge conventional thinking. But ultimately, this relationship is a close one: if a party misreads the times and their proposals lose touch with the people and their realities, then their political fortunes fail. Thus, taken holistically political manifestos represent the dominant belief system in society, and provide a useful historical record of how that belief system has evolved over time.

In Part I, I use a total of 153 political party manifestos 1867-2017 from two data sources: The book *Canadian party platforms 1867-1968* (Carrigan 1968) provides manifestos for 1867-1968, and manifestos 1972 – 2015 were downloaded from the Poltext Electronic Manifestos Canada database in the Department of Political Science at the University of Laval.

Chapter 3 maps the dominant belief system in Canadian federal politics 1867-2017 based on the manifestos. I propose three subjective levels of belief systems, which provides a way to identify the relevant features of the dominant belief system. Analysis and interpretation of these manifestos was organized according to seven distinct historical periods, and involved historical interpretation of these texts to identify the subjective levels of belief systems. This analysis demonstrates how the dominant system has evolved over the long term and reveals several important insights. It identifies several macroeconomic paradigms separated by paradigm shifts during which much of the conventional wisdom was discarded. Despite those shifts, certain elements were retained and persist. As a result of this retention despite paradigm shifts, elements have accumulated, leading to the increasing complexity of the dominant system. This initial mapping demonstrates how, despite paradigm shifts, economic growth is one of those elements that was retained and persists.

Next, Chapter 4 narrows the focus to tell the story of economic growth and the environment in Canadian federal politics 1867 – 2017. This story exhibits features that are not accounted for by existing explanations. Despite deep critique during the 1970s, economic growth persisted as a macroeconomic policy objective. Since the 1970s, although each party has recognized that growth is incompatible with environmental protection, those parties have increasingly adopted the position that growth and environmental protection are compatible. This story presents a paradox: if from both logical and ethical perspectives growth is undesirable, then how do we explain the initial questioning of growth in the 1970s, but then the near silence on it after the early 1970s? And since the 1970s, why have parties increasingly come to support growth rather than challenged its dominance, despite each having explicitly recognized that growth is incompatible with environmental protection?

Part II: Explaining the paradox of growth

Having identified in Part I the phenomenon to be explained, Part II makes the main explanatory argument of this thesis, proposing and then demonstrating a coevolutionary explanation for the paradox of growth. Moving from empirical documentation of the paradox of growth to explaining that paradox, a central challenge is conceptual integration. Explaining the paradox of growth is at once a problem of dominant belief systems and society-nature relationships: how do they come together and relate to explain the persistence of growth?

I build on recent efforts in the environmental social sciences to develop an integrative understanding about how society and nature relate (Reed and Harvey 1992; Foster 1999; Lidskog 2001; Mingers 2014). In particular, critical realism is a nuanced philosophy of science developed by Roy Bhaskar (1979) that provides a bridge between the natural and social sciences, and a foundation for conceptual integration. However, although critical realism provides a way to develop integrative ways to understand society, nature, and their relationships, it does not provide the substantive concepts and theories needed for particular research (Jessop 2015). An important challenge for critical realists is "how to translate the general meta-theoretical framework into relevant research questions, strategies, studies, and conclusions" (Jessop 2015, p243). In other words, the meta-theoretical framework of critical realism needs to be extended and applied to specific research domains.

Building on critical realism, coevolution is a complementary way to understand how society and nature relate. Coevolution is the process by which at least two entities or systems "causally influence the evolution of each other" (Norgaard and Kallis 2011, p289). Human consciousness is an important part of the coevolutionary process through which society and nature relate (Norgaard 2019). As such, dominant belief systems can be thought of as complex systems that coevolve along with society and nature.

Chapter 5 proposes and develops the novel Emergent Coevolutionary Framework, an integrative way to understand society-nature relationships that is grounded in critical realism and can be used to explain the paradox of growth. Ann Swidler's (1986) distinction between settled and unsettled times is proposed and developed as a way of understanding coevolution through periods of stability and instability. A sequence of settled and unsettled times, characterized by distinct processes that dominate in different times, provides a way to understand and explain the story of growth in Canadian politics.

Next, Chapter 6 demonstrates in detail how this coevolutionary process produced the story of growth in Canadian politics. Using data from political manifestos and document review, this chapter presents the empirical sequence of settled and unsettled times in Canadian federal politics 1867-2017 and then describes the relevant processes and dynamics that led to the establishment and persistence of economic growth. I show how the dynamics that dominated during each period of this sequence of settled and unsettled times constitutes a coevolutionary selection process that both fits the empirical data and produces the phenomenon of interest.

Part III: Canadian environmental politics in settled and unsettled times

Part III provides a deeper analysis of settled and unsettled times to explore the implications of this coevolutionary explanation for action. A common assumption is that dominant belief systems structure society-nature relationships by defining the features and patterns of everyday life (Dunlap 2008). However, the leading proponent of coevolutionary theory in the environmental social sciences, Richard Norgaard, argues that human agency is disturbingly limited in the short run:

> culture has determined environment and environment has determined culture. At each point in time there is a near gridlock of coevolved knowledge, values, technologies, social organization and natural environment. Yet, over the longer run we approach the

> equally disturbing situation of nothing determining anything, that all will change in unpredictable ways (Norgaard 2000, p163).

While coevolution recognizes the role of human agency, it also emphasizes the selective pressures of existing systems, as well as the "continental" evolution of the entire system of systems (Norgaard 2000, p163).

What then is the role of agency, human belief systems, and conscious action from a coevolutionary perspective? The specific coevolutionary explanation I develop and demonstrate in Chapters 5 and 6 provides one way to understand the role of and constraints on human agency. According to my explanation, the constraints on and opportunities for change differ significantly between settled and unsettled times.

Chapter 7 analyzes Canadian politics of the environment and the economy during the critical period 1970-1982 as an example of an unsettled time. Using extensive archival sources, I show how Canada was at the forefront of environmental thinking and action in the 1970s, with environmental policies that had deeply transformative potential. However, I argue that debates between economic growth and the environment can be better understood as occurring in relation to larger coevolutionary dynamics as Canada entered an unsettled time. I document how early environmental aspirations encountered the constraints of conventional wisdom, structures, and entrenched feedbacks. Policies and actions that did not promote growth were politically non-viable, whereas pro-growth policies were politically successful. In essence, deeply transformative environmental ideas and the people and groups that carried them were selected against and did not "survive" the unsettled time of the 1970s. While the unsettled time of the 1970s provided a significant and transformative opportunity for the environment, this was largely a missed opportunity.

Chapter 8 explores the implications of my coevolutionary explanation for the prospects and barriers to Canadian environmental governance in the settled time since the 1970s. This chapter demonstrates how Canada's systematic failure to act on the environment has not primarily been planned and intentional, but is the result of progressive selection of Canadian environmental policy in relation to the dominant system and its dynamics at key moments. Drawing on elite interviews in Canadian environmental politics and an articulation of the dominant system, I show how Canadian environmental and climate policy have emerged and evolved within this system so that environmental policies were selected to fit with the dominant

system at key selection moments. It is precisely at those moments when the environment is least prioritized and the economy is most urgently in need of attention that the environment suffers the most. This process reveals the extent to which options are constrained in settled times.

The concluding chapter discusses the implications of my findings for integrative research in the environmental social sciences, for explaining economic growth, and for the prospects of change in settled and unsettled times. The novel Emergent Coevolutionary Framework contributes to the critical realist project of theoretical integration and has implications for how we understand and explain phenomena such as growth. This coevolutionary framework provides an explanation for the persistence of growth in Canadian politics that demonstrates how political decisions are highly constrained even in unsettled times when structural constraints are weakest. Even so, this analysis introduces a practical way to understand both the constraints on and possibility for human agency in a complex and coevolving system whose growth threatens to overwhelm the planet. Importantly, I emphasize how the political commitment to ensure high employment influences the persistence of growth. Finally, I discuss the prospects for change in settled and unsettled times. If constraints dominate in settled times, there are both significant opportunities and risks in unsettled times.

Chapter 2: Literature review

Many disciplines have contributed to explaining the persistence of growth. I review explanations from the main disciplines in the environmental social sciences that have focused on this question from a perspective that is critical of growth: ecological economics, political economy, and environmental sociology. Explanations for the persistence of growth ask this question in different ways, seeking to understand the phenomenon from a variety of perspectives. Constructivist approaches seek to identify how the growth paradigm was established and problematize its hegemony. In contrast, materialist explanations look at growth from coevolutionary, structural, and systemic perspectives: ecological political economy presents a coevolutionary view of nation states, growth, and capitalism; the Treadmill of Production explains growth as a structural dynamic; and the growth imperatives of capitalism research interrogates growth from a system dynamics perspective, mapping growth-related dynamics and feedbacks. Finally, functional explanations provide an alternate and often overlooked possibility for explaining growth from a historical evolutionary perspective. Each of these explanations provides insights that partially explain the paradox of growth. However, none on their own are adequate to explain this paradox, and integrative approaches are needed.

While these approaches vary in the degree to which they ascribe explanatory power to human agency, they all assume that the paradox of growth involves some degree of human agency; they assume that it matters whether or not human societies pursue growth as a primary policy objective.

Growth as a natural feature inherent in human societies

Any explanation that assumes some degree of human agency first requires a null hypothesis that growth is natural or inherent. According to this null hypothesis, growth is a natural feature of human societies such that it does not matter whether or not humans pursue growth. There is an innate drive towards growth and expansion. However, growth has inherent energetic costs, and societies reach a point of diminishing returns whereby more growth no longer outweighs its costs, at which point they may collapse (Tainter 1988). In short, if growth is a strategy for addressing societal problems, collapse occurs when a society runs out of energy or exhausts its ecological niche.

However, the human species uses its ability to manipulate symbols and culture to modify and expand its ecological niche. Manipulation of symbols and culture enable societies to overcome ecological constraints by enhancing their access to energy and material flows. The human species expanded its influence over long evolutionary timeframes. This expansion is characterized by three successive socio-ecological regimes: the fire regime, the agrarian regime, and the industrial regime (de Vries and Gouldsblom 2003). With each successive regime, humans developed greater control over energy and materials, overcoming ecological constraints (de Vries and Gouldsblom 2003). Thus, human societies evolved as integrated wholes, overcoming environmental constraints and expanding to fill new ecological niches.

From this perspective, modern industrial capitalism is the most recent phase in an ever-expanding human sphere of influence. Industrialization and globalization enabled human civilization to overcome the constraints of the agrarian regime (de Vries and Gouldsblom 2003). First, industrialization enabled societies to access previously inaccessible fossil fuel energy, while new technologies and forms of social organization developed to provide increasing food, services, and ultimately drive more energy- and material-intensive lifestyles. Second, globalization enabled increasing flows of energy and materials around the world, expanding the human niche to encompass the globe. Fossil fuels, technology (agriculture, the steam engine), colonialism, and other factors enabled Western civilization to temporarily escape the pattern of growth and collapse (Goldstone 2002; Huber 2013, Smil 1994). In other words, modern society found ways of lengthening the energetic tether that keeps societies from growing beyond its ecological limits.

The explanation that growth is a natural feature inherent in human societies is a useful heuristic, but is over-deterministic and has limited explanatory power. Admittedly, growth and complexification occur, while collapse and de-complexification are also the norm (Elias 2000; Diamond 1999; Tainter 1988). This pattern of increasing and decreasing complexity of human societies suggests that, although growth may be *one* propensity of human societies, collapse is *another* propensity of human societies. Yet growth is not an inherent and natural feature of human societies. There are numerous examples of civilizations that have lived for thousands of years on the Earth without ecological overshoot and collapse (Brody 2001; Mann 2006). The idea that growth is natural does not explain why some societies destroy their ecological niches, while others do not.

Avoidance of collapse through stability and social constraint in relation to a given ecological niche is a third possible strategy of human societies. This third possibility recognizes that human societies may engage in ecological niche co-construction and not necessarily ecological destruction. If growth is a natural propensity of human societies, it is neither the only feature nor necessarily the overriding one. Societies possess multiple, dynamic features that enable them to navigate diverse socio-ecological contexts using different strategies. Studies of civilizations that have undergone social-ecological transformations indicate that collapse is not inevitable (Butzer and Endfield 2012; Tainter 1990). Instead, they provide critical insights into both the social processes and the underlying causal mechanisms that intersect to explain these transformations (Cumming and Peterson 2017), including how multiple mechanisms interact differently at different times in history (Goldstone 1991). While collapse is a consequence of multiple factors and is often triggered by environmental factors such as climate, social factors appear to be, if anything, more important in determining outcomes (Butzer and Endfield 2012). The important question is whether and how societies can navigate situations in ways that enable them to persist in harmony with their environments. How can and do human civilizations stabilize themselves and prevent collapse within ecological limits? Rejecting the null hypothesis that economic growth persists simply because it is inherent to societies leaves open the question, what explains its persistence?

Constructivist approaches: constructing the growth paradigm and its hegemony

Constructivist approaches document how growth became a primary policy objective. These approaches, variously termed interpretivism, historicism, and critical theory, show how growth was constructed and became hegemonic. While early studies focused on economists and their ideas (Arndt 1978; Hamilton 2004), focus has shifted to how discourses and paradigms were constructed in different contexts. Most influential is Heinz Arndt's 1978 *The Rise and Fall of Economic Growth*, which documented the intellectual history of economists in the post-WWII era. Recently, international and country-specific case studies have documented how this phenomenon was historically constructed as a system of ideas in international relations (Dale 2012; Purdey 2010), the OECD (Barry 2020; Schmelzer 2016), the United States of America (Collins 2000; Lane 2014) and other countries such as Japan (O'Bryan 2009).

These approaches start from the taken-for-granted nature of economic growth and ask how the idea of growth became hegemonic. Power, hegemony, and class relations are central explanatory variables. Hegemony-based explanations posit that economic ideas dominate and are hegemonic because nation states and their elite make the economy and its growth their first priority (Hamilton 2004; Purdey 2010). For Hamilton (2004), the problem is that the ideas of economists and neoliberalism are naturalized and remain unchallenged. These ideas, and the economy in general, are treated as neutral and reified entities outside of politics. As Clive Hamilton observes, the economy is treated as an "immovable and all-conquering force" as "the market has become reified in the public mind" (2004, p141). Increasingly, these studies reveal the political and power dimensions of how ideas were constructed, arguing that their hegemony was established in the context of the cold war ideological competition between capitalism and socialism (Barry 2020; Purdey 2010; Schmelzer 2016). They argue that the hegemony of growth can be countered by political choice and by opposing the power of elites (Purdey 2010; Schmelzer 2016; Barry 2020; Dale 2012; Hamilton 2004).

Although these studies provide rich historical accounts that show how growth was constructed and became dominant, they do not adequately explain why it persists. In part, this gap is the result of constructivist assumptions about how change occurs and the role of ideas. For instance, Purdey explicitly rejects explanation in favour of rational and normative critique, arguing that pursuit of growth involves a choice that is "fundamentally a normative exercise" requiring "assent of the relevant community" (Purdey 2010, p14). Setting aside the question of how and why the growth paradigm is perpetuated, Purdey argues that the growth problem "necessarily entails a collective value judgement about the world", which supports a particular order (Purdey 2010, p15). For Purdey, "choosing between competing paradigms is a fundamentally normative exercise; it involves 'a choice between incompatible modes of community life [for which] there is no higher standard than the assent of the relevant community'" (Purdey 2010, p14). In adopting this approach he rejects explanation and sidesteps the question of how change can and does occur.

Another limitation is that critical theory is hampered by conceptual and theoretical paucity. While studies implicitly invoke constructivist processes such as legitimation, consent, normalization, reification, and politicization, they are rarely used explicitly and it remains unclear how these mechanisms relate to one another (Purdey 2010; Hamilton 2004).

Furthermore, constructivism does not posit or explore causal relationships between ideas and other factors (Cox 1986; Purdey 2010). As a result, these studies do not adequately identify the underlying mechanisms or demonstrate how those mechanisms come together to produce the phenomenon through the historical processes they reveal. This approach amounts to pluralist empiricism, which is unable to explain the systematic connections between ideas, social relations, and institutions (Burnham 1991). As a result, hegemony-based explanations for growth are historically rich, but lack theoretical and explanatory depth. They leave us asking how ideas, institutions, and material forces come together over time.

A related limitation is that constructivist approaches do not address the relationship between ideas and material reality. Constructivism over-emphasizes the ideational and normative dimension at the expense of other explanatory factors. It presents an "over-socialized" perspective on human behaviour that places too much explanatory power on ideas. The underlying assumption is that thought drives action. The result is reliance on a paradigm shift logic, ignoring how or whether ideas are connected with the society-nature relationship. What is the relationship between the growth paradigm and how humans relate to the environment?

While there is recognition that the growth paradigm is not solely ideational, the relationship between ideas, social practices, and the material environment remains unclear. For instance, Purdey (2010) uses the growth paradigm to refer to the society-nature relationship as a whole – the "holistic relationship between human society and the planet" (Purdey 2010, p8). He interprets this holistic relationship as a socio-natural continuum – from material to abstract ideas. Yet he adopts a mind/matter duality, characterizing the growth paradigm "as having two fundamental components – ideational and material" (Purdey 2010). He largely focuses on ideas at the expense of the material dimension, and does attend to the *relationship* between ideas and the society-nature relationship.

Others have proposed ways to span the constructivist-materialist divide. For example, Maja Gopel (2016) develops the concept of the materialization of ideas, which provides a promising way to address the relationship between ideas and the society-nature relationship. This concept "describes how humans are both subject and object of making history, how reality today shapes the imaginary of how reality could be in the future" (Gopel 2016, p44). She views paradigms as embedded and coevolutionary: "prevailing paradigms and their key ideas are embedded into very tangible structural outcomes that in turn confront and embed individuals

within processes and systems that shape their mind-sets and limit their scope of action" (Gopel 2016, p44-5). However, she does not sufficiently develop or apply this concept. Instead, she moves on to characterize the growth paradigm as a paradigm of neoclassical economics and to describe alternatives without exploring how such an approach could be applied. In sum, constructivist research acknowledges the need to include materialism, but has failed to incorporate it in analyses. These materialist and other recent co-constructivist approaches (i.e. Lane 2015) show promise for more integrative understanding of how ideas and material factors contribute to the persistence of growth.

Materialist explanations: coevolutionary, structural, and systemic perspectives

Materialist approaches complement and address the shortfalls of constructivism, but encounter their own explanatory limitations. These explanations, rooted in the Marxist traditions of political economy and environmental sociology, foreground the material and systemic dimensions of growth. Ecological political economy emphasizes how nation states coevolved with growth and capitalism; the Treadmill of Production problematizes the structural interdependence of groups in society; and imperatives of capitalism research applies systems thinking to identify specific dynamics and feedbacks of growth.

Ecological political economy: the coevolution of nation states, growth, and capitalism

Ecological political economy develops Marxist critiques of capitalism and is deeply concerned about economic growth (Quastel 2016). According to this perspective, states, growth, and capitalism coevolved. Capitalism is characterized by a series of interlocking elements that together drive growth (capital accumulation). These elements include value as exchange value (money), private property (and ownership of the means of production), wage labour, capital-labour relations, private profit, exchange through markets, and the nation state (Harvey 2014). Growth emerges from these interlocking elements, and is "institutionalized in an unplanned, nature-like way, so that no option for self-conscious control of this process exists" (Habermas 1975, p41).

The nation state is an integral part of this system. As nation states became the dominant survival unit of modern societies (Gellner 2008), they also became responsible for social wellbeing. The nation state, market economy, individualism, and industrialism coevolved, so that

traditional rural livelihoods and community forms of care were replaced by the welfare state as the primary vehicle to deliver social wellbeing (Polanyi 1944). As a result, the legitimacy of nation states depends on how well they deliver wellbeing (Habermas 1976).

The state is trapped between twin dynamics: capital accumulation and legitimation. Modern states are predicated on the state delivering economic growth, structuring production, addressing unemployment, rectifying inequalities (Habermas 1975), and increasingly addressing environmental problems (Paterson 2016). However, capital accumulation causes social and ecological problems. When states cannot deliver on promises to deal with social and ecological problems, they face a legitimacy crisis. Capitalist states attempt to secure the conditions for growth, but at the same time have to deal with the social and ecological legitimation crises caused by that growth.

A major debate among ecological political economists is whether growth is inherent to nation states, and if not the extent to which nation states can become ecological. For ecological political economists, nation states are inseparable from growth (Paterson 2016). Their distinct structural and historical relationships mean "detaching a growth imperative from the state is impossible to imagine" (Paterson 2016, p5). Similarly, Harvey argues that a zero-growth capitalist economy is "a logical and exclusionary contradiction" (2014, p132). Capitalist states cannot abandon growth without abandoning the capitalist logic of organization and valuation (Habermas 1975).

Rather than expecting an ecological transformation, ecological political economists view capitalism as an evolving system that continues to reinvent itself in response to crises; growth will probably continue, but at the expense of social and ecological wellbeing (Harvey 2014). The question of persistence or change is more a matter of socio-political choice and revolution. Only processes that challenge the capitalist logic, such as a social revolution, hold the potential for radical transformation away from growth (Paterson 2016). A key criticism of this perspective is that it does not leave much room for agency, even in times of crisis and structural change.

In contrast, green state theorists maintain that the core anti-ecological functions of states are historically constituted and potentially transformable. States are part of evolving complexes of institutions and power that develop specific functions in response to historical events and pressures (Paterson 2016). Green state theorists argue that there is no theoretical reason why states could not exist in the absence of growth (Dryzek 2003; Eckersley 2004). Social

movements and rational deliberative democratic processes have the ecological potential to transform the state. Ecological political economists counter that, while these processes are indeed occurring, they are not as deeply transformative as claimed (Paterson 2016). Instead, states continue to be driven primarily by capital accumulation and legitimation. This debate about whether states could exist without growth remains inconclusive (Paterson 2016). Ultimately, the inherent-changeable debate is unhelpful because it does not tell us what makes growth inherent or by what processes it might change.

There is a need to better understand how forces come together to perpetuate, and could potentially oppose growth. Ecological political economists do not adequately conceptualize processes such as accumulation, legitimation, social movements, and revolutions, or posit the underlying causal mechanisms that drive these processes. In particular, the coevolutionary perspective of ecological political economy emphasizes the functional interdependence of different features and sub-systems, namely the state, the growth imperative, and capitalism. Yet, these accounts remain weak on explaining the coevolutionary processes through which they have become functionally interdependent. This points to the need for a larger synthesis of coevolutionary and functionalist explanations that account for multiple selection forces. How might these explanations be brought together to explain the persistence of growth in both times of crises and stability?

Structural explanation: the Treadmill of Production

A more specific approach in the Marxist tradition is the structural explanation called the Treadmill of Production (ToP). Structural explanations appeal to the causal influence of enduring structures such as the organization of interdependent groups in society (Little 1991). Schnaiberg (1980) argues that the persistence of growth is structural: continued economic production originated as the result of an economic growth coalition between capital, labour and the nation state, but this combination has resulted in a treadmill upon which these groups are trapped. Thus, the ToP is a metaphor "meant to suggest that the problem is neither capitalism, technology or large organizations, but rather the embedded logic of the current form of social organization" (Schnaiberg et al. 2002, p18).

The ToP is a structural relationship within which the environmental nation state is trapped in the growth dilemma. The ToP consists of five interlocking premises: economic

expansion, increased consumption, solving social and environmental problems by speeding up the treadmill (economic growth as a political panacea), reliance on large firms for growth, and alliances among capital, labour and government (Schnaiberg 1980). Corporations, labour and the state are locked into specific roles that keep them on the treadmill, and cooperating to produce it. Although corporations are the primary driving force towards continually increasing capital accumulation (Curran 2017), the ToP metaphor suggests that, rather than particular actors deliberately being responsible, the problem is the structural interdependence of actors.

The state's role in perpetuating the treadmill stems from its preference for growth to ensure tax revenues and improve likelihood of re-election (Buttel 1996). To increase private accumulation, states subsidize private production. This accumulation tends to lead to automation, unemployment, and demands for job-creation and social support. In turn, these results drive state needs for taxes as well as increased social spending to remedy harms caused by accumulation and to offset the legitimacy deficits they cause. The ToP provides a compelling structural explanation for why states are trapped on the growth treadmill. The strength of the ToP approach is that it clearly defines the structural dynamics that perpetuate growth at the nation state level, at least in the post-WWII period until the 1970s.

However, the explanatory power of the Treadmill of Production is limited because structures are constantly evolving, and the ToP has not been updated to capture these changes. Globalization has transformed the structural constraints of individual nation states through neoliberal capitalism (Paterson 2016). The state has diminished in relation to, and become increasingly constrained by, mechanisms such as trade liberalization and international finance (Buttel 2004). Neoliberalism and the globalization of finance, trade, and labour fluidity have led to global interdependence and structural constraint. Globalization means that even relatively stable developed countries cannot individually discard growth for at least two reasons (Victor 2019). First, states are members of international organizations and agreements, bound by treaties and international laws. To reject growth, a country would need to extricate itself from many of these agreements. Second, globalized capitalism makes adoption of a radically different model very difficult because people who own large amounts of capital would oppose radically different policies, and could transfer capital and skilled labour elsewhere. Developed to describe the structural constraints of post-WWII capitalist states, the ToP has not been comprehensively

updated with respect to the structural complexity of neoliberal globalization (Buttel 2004). There is a need to understand how the ToP has evolved and the influence of other structural constraints.

Another limitation of the ToP is that it does not adequately account for the role of ideas, but instead implicitly appeals to both constructivism and functionalism. Recognizing that the relationship between the treadmill and the nation state is not only structural, but also ideological, Schnaiberg (1980) attempts to explain how states arrived at this situation. He describes how the ideology of growth of neoclassical economics was institutionalized so that, since WWII the "chief intellectual proponents of the [economic growth] model became more safely ensconced in high decision-making positions in the state" (Schnaiberg 1980, p217). In addition to this constructivist reading, he also appeals to functionalism, using an "exists in order to" reasoning. The ideology of growth became held and was perpetuated for several reasons (Schniaberg 1980): it produced apparently good results, social spending kept social peace, economists who held these views have gained high status in public policy influence, and economic growth was depoliticized in terms of adjusting techniques rather than making basic social choices. He argues that growth was adopted through a "combination of ideology and successful practice", which led to an "increasingly depoliticized view of production expansion as a universal social goal" (Schnaiberg 1980, p217).

The ToP does not adequately develop its account of the role of ideas. In general, neo-Marxists tend to avoid or downplay cultural explanations such as social construction because these explanations leave macro-structural accounts unexamined (Gunderson 2015). In particular, Schnaiberg refers to ideational factors that underlie actors' structural positions, but the processes by which these profound changes in modern belief systems came about remain opaque and unexamined (Gunderson 2015). The ToP approach is insufficient to account for the role of ideas in driving environmental problems. As a result, the ToP explains observed structural constraints, but is unable to explain the ideological persistence of growth despite structural change. If the ToP metaphor implies need to transition away from growth towards a steady-state economy or degrowth scenario, why do states not navigate a path down from growth at critical junctures?

Growth imperatives of capitalism: evolving system dynamics and feedbacks

Environmental and heterodox economics more closely and rigorously identify the growth imperatives of capitalism as relationships and feedbacks from a systems perspective. Richters

and Siemoneit define a growth imperative as "a system immanent mechanism that the economy has to grow to maintain social or economic stability, independent of the will of the agents" (2017, p6). A growth imperative is a mechanism "embedded in the structure of the economy which makes the latter grow, without there being a viable alternative option, namely, not to grow" (Strunz, Bartkowski & Schindler 2017, p327). This work attempts to identify specific causal relationships that the produce the imperative to grow. Importantly, these mechanisms are embedded and systemic. As such, they are analogous to structural dynamics identified by the ToP, but recognize that these imperatives are evolving rather than static.

Money and finance have been major foci in the growth imperatives of capitalism literature. Yet there is "substantial uncertainty" about whether monetary factors such as debt and positive interest rates amount to growth imperatives (Strunz, Bartkowski & Schindler 2017, p348). Analyses have so far been inconclusive as to whether there are monetary growth imperatives to capitalism. In a systematic assessment, Strunz, Bartkowski and Schindler found that "very different conclusions can be reached regarding the (non-)existence of monetary growth imperatives. Indeed, contradictory results may be derived from seemingly plausible assumptions" (2017, p327). A few more robust conclusions about monetary growth imperatives have been identified. For instance, Jackson and Victor (2015) modeled credit as interest-bearing debt to demonstrate that it does not on its own create a growth imperative. In contrast, pension schemes rely on growth to offset the effects of demographic change and thus in combination with demographic aging act as a growth imperative (Strunz and Schindler 2018). These findings suggest that money on its own may not be a growth imperative, but that money plays an important role in systems that produce a growth imperative.

The most compelling and commonly cited growth imperative is the political obligation of states to deliver employment (Fischer-Kowalski and Steinberger 2017; Strunz and Schindler 2018; Richters and Siemoneit 2019). The availability of cheap energy means that labour can be substituted for by cheap energy with the help of technological innovation (Richters and Siemoneit 2017). Cheap energy and technological innovation increase labour productivity, reducing the need for labour (Richters and Siemoneit 2017). The result is a race between labour reduction through technological innovation versus reabsorption through accumulation that makes unemployment permanent. This process explains the "race between displacement of labor through technological progress and reabsorption through accumulation" that can lead to

"permanent unemployment" if accumulation is too slow (Richters and Siemoneit 2017, p6). This in known as the productivity trap of market economies: if continually increasing labour productivity means that less labour is needed, increasing production (growth) is needed to maintain employment (Strunz and Schindler 2018). As long as livelihoods depend on wage labour, growth is an imperative. The relationship between unemployment and growth in output is so stable, it is known by economists as Okun's law (see Strunz and Schindler 2018).

States are also subject to larger reinforcing feedbacks that drive growth (Fischer-Kowalski and Steinberger 2017). Economic activity measured in money (GDP), population, and energy and resource use form a causal triangle that reinforce one another. As such, economic growth is in part driven by and connected in reinforcing feedbacks to population growth, and energy and resource use, each of which act as nodes with their own reinforcing feedbacks (Fischer-Kowalski and Steinberger 2017).

However, the macro-feedbacks that reinforce growth are weakening. Fischer-Kowalski and Steinberger (2017) observe that population dynamics and access to cheap resources no longer support economic growth as they did over the past century. Moreover, self-reinforcing mechanisms at each node have become weaker. For instance, the reinforcing feedback between population and economic activity has reversed so that the more prosperous people are the fewer children they have, although this relationship is not direct (Fischer-Kowalski and Steinberger 2017). These shifting macro-scale feedbacks suggest that, while growth may be a structurally embedded, those structures are constantly evolving such that growth need not persist.

To sum up, the strongest growth imperative of the state is the political responsibility for employment. Technological developments increase labour productivity, creating a political imperative to grow because the state is seen to be responsible for delivering employment. This structural dynamic is similar to the ToP, but growth imperatives literature differs in that it captures structural change. Larger systemic dynamics such as population and resource use feedbacks are changing, and it remains unclear whether and how the political obligation to deliver employment can also shift. While political responsibility for employment is the primary growth imperative, debates highlight the fact that the imperative towards growth is a systemic dynamic driven by multiple interacting elements. Although growth imperatives are mostly posited in the context of money, other drivers such as cultural, institutional, and political-economic factors need to be further investigated (Strunz, Bartkowski and Schindler 2017).

Echoing this need, Strunz and Schindler (2018) call for a full mapping of these relationships, interdependencies, and feedbacks. Mapping these dynamics and the ways they are evolving can help further explain what specific mechanisms have and continue to contribute to the persistence of growth.

Functional explanations: static and evolutionary perspectives

Functionalism explains why certain features, components or elements are present in a system, and can make important contributions to explaining the persistence of growth. According to functionalism, a form or feature (i.e. economic growth) is pursued or persists because it serves a specific function. These explanations are consequence relations that take the form "has the function of" or "exists in order to" (Kincaid 2007). For example, "economic growth persists in order for nations to maintain employment" is a functional statement. More formally, functional explanation takes the form that if A exists in order to B, this consequence relation explains the persistence of A (Kincaid 2007).

There are at least two types of functional explanation that provide different ways of explaining – or not – why states pursue growth. The standard functional explanation explains why features or elements are present in a system and involves two steps (Agar 2002). First, a phenomenon corresponds to the presence of or seems to have a certain effect on another phenomenon (correlation). Second, an explanation is deduced through the argument that the temporal context or situation is such that the phenomenon would have the effect that it does. The context has the characteristics or properties that make it likely that if the phenomena exists in that context it will have the observed effect. The function of an element or feature is always in relation to a goal state of the system, and has been criticized as teleological rather than explanatory (Agar 2003).

According to the standard functional explanation, economic growth persists because it performs certain functions. This approach is often used to provide empiricist reasons for why growth persists without demonstrating causation. For instance, Purdey (2010) presents several functionalist explanations for why growth is pursued in the present: to improve living standards, to increase employment, to reduce poverty, to ensure peace and security, and to protect the environment. Growth meets many domestic demands (i.e. public infrastructure, education, healthcare) without forcing politically challenging trade-offs. Growth also enables states to

address problems such as economic downturns, inflation, business cycles, and repaying national debt. In these ways, growth "represents the ideal and most efficacious of political practices for any state, because it is the best of all social lubricants" (Purdey 2010, p46). In sum, growth is used as a political panacea, an expedient to ensure stability and prosperity.

However, functionalist claims of this type are empiricist and do not demonstrate the historical consequence relations that would be needed to demonstrate causation. For instance, Purdey's list of the functions of economic growth could be lengthened infinitely, without telling us which functions are necessary or sufficient to explain the persistence of growth. These claims are empiricist because they rely on the constant conjunction (i.e. correlation) of events, but ignore the causal mechanisms that produce those events. As such, standard functional explanations are grounded in the Deductive-Nomological model, a view that has been discredited by critical realist philosophy of science (Agar 2003), and do not meet explanatory criteria.

Functional explanations can also be evolutionary. The evolutionary account explains the presence of a feature or element in a system as the result of a historical process. The evolutionary version of functionalism accounts for or explains the presence of a feature or phenomenon in a system as a result of that feature's historical contribution to success, survival, or other system capacity. Kincaid (2007) provides a formal three-part account of evolutionary functional explanation whereby A exists in order to B if:

1. A causes B
2. A persists because it causes B
3. A is causally prior to B (B causes A's persistence only when B is caused by A)

This formulation of functional causation is necessarily historical because current phenomena stand in some relation to past ones (Kincaid 2007). However, rule 3 distinguishes functional explanations from symmetric explanations of mutual causality in which A and B interact in a mutually reinforcing feedback loop (Kincaid 2007). Thus, evolutionary functional explanations are a subset of causal explanations.

Explanation based on this evolutionary interpretation of functionalism would posit that growth performed certain functions in specific historical contexts, although it may or may not still perform those functions if other functions arose. Since those historical functions conferred evolutionary advantages on the system, growth has been retained as a feature of the system. The idea that economic growth persisted because it served the purpose of winning the Cold War is an

evolutionary functional explanation. First, increased production helped the Western Allies to win WWII and Western countries to win the Cold War (A causes B). Second, Western countries realized that higher growth rates helped them win the cold war and continued to pursue growth for that reason (A persists because it causes B). Third, countries only began pursuing growth when they realized that growth helped them compete better in the Cold War (A is causally prior to B and B causes A's persistence only when caused by A). Although this explanation is only partial, it is supported by historical studies on the role of growth during WWII and on Cold War competition (Schmelzer 2016; Barry 2020). It is plausible to propose additional evolutionary functional explanations for the persistence of growth, although those consequence relations have not yet been rigorously demonstrated.

While functionalism partly explains the persistence of growth, some reject functionalism on the grounds that it does not capture the normative and irrational commitment to growth. As Purdey argues, "the application of functional analysis to the growth paradigm reveals an element of illogic, even irrationality, in state behaviour which eludes explanation [...] the distinctively normative content of the paradigm remains unaccounted for by this genre of analysis" (2010, p47). Purdey argues that states reject some options without due consideration (i.e. a steady-state economy) and that omission of alternatives to growth is not explained by functionalism. Functional explanations remain incomplete because the normative dimension cannot be adequately explained, and thus require complementary explanations to account for how and why features become normalized or institutionalized.

However, Purdey's critique does not refute the evolutionary functional explanation for two reasons. First, the accusation of irrationality assumes that the rationality that states pursue is driven by logic and cost-benefit analysis. However, political decisions may be driven by a different rationality of political compromise, election cycles, and incrementalism (Lindblom 1959). Second, the evolutionary interpretation of functionalism is able to account for the how growth emerged as a historical social objective, although that historical context may have since changed and new functions for growth may have emerged. For these reasons, an evolutionary interpretation of functionalism cannot be so easily discounted.

Moreover, while functionalism has been accused of being teleological, the evolutionary explanation of growth as historically contributing to the success of states can help better understand periods of stability and change. The evolutionary perspective is indeed teleological to

the extent that it explains a form as fulfilling the systemic functions of reproduction, persistence and success. Yet, system goals may change and evolve over time such that the function that a specific feature of a system evolved for may no longer be needed or exist. This points to the need for analysis to understand the historically contingent evolutionary forces driving selection and retention of particular features such as growth in both periods of stability and periods of structural change such as crises. How do features become embedded and persist in systems as they evolve?

Research gap and opportunities for integration

None of these explanations adequately explain the persistence of growth. Constructivist approaches describe how growth became established, institutionalized, and normalized, but fail to explain why it persists. In contrast, materialist explanations, including ecological political economy and the Treadmill of Production describe the coevolution of states and growth within capitalism, but are over-deterministic. They require conceptual integration to better deal with ideational factors, and the ToP needs to account for how structures evolve. Research on the growth imperatives of capitalism begins to address this gap, but likewise fails to develop a comprehensive theory for how structures evolve. Finally, functionalism provides a promising framework to understand how structures evolve, but does not address tensions between constructivism and materialism, or account for the normative dimension of growth.

While no explanations explain the persistence of growth on their own, there are distinct complementarities between these approaches, implying the need for integration. Explanation requires integration to understand how multiple mechanisms come together, including ideas, institutions, and material factors (Goldstone 2016). Constructivists have proposed a number of concepts with the potential to link concepts of society and nature. These concepts include the materialization of ideas, the idea that belief systems are embedded in society and nature (Gopel 2016), and co-construction (Lane 2014). In particular, co-construction holds promise to address the limits of and tensions between constructivism and materialism.

I also identified complementarities between a further developed version of the coevolutionary approach of ecological political economy and evolutionary functional analysis. While historical processes were addressed in constructivist, materialist, and functionalist

explanations, there is a need to better understand the evolutionary processes by which economic growth was selected for and retained.

At the same time, there is a need to account for the evolution of structural constraints (Buttel 2004), and especially to understand the potential for structural change during critical junctures or crises. An important omission is that no explanations account for periods of stability and change, and especially for how structural change has occurred. This points to the need for a larger synthesis of coevolutionary and functionalist explanations that account for multiple selection forces in historical contexts of both stability and change.

Together, these concepts point to the need for integrative approaches that are co-constructivist, coevolutionary, and seek to account for periods of stability and change.

Chapter 3: The dominant belief system in Canadian federal politics 1867-2017

Ideas never exist in isolation, but in relation to other ideas, as well as their social, ecological, and historical contexts. Indeed, critics of economic growth often refer to the growth paradigm as the entire complex of ideas and ways of thinking that include and relate to economic growth (Purdey 2010; Gopel 2016). This framing is useful because it emphasizes the relational nature of ideas, but is limited because it implies that ideas change through a paradigm shift in response to rational arguments that undermine the paradigm's flawed assumptions (Meadows 2008). Yet this assumption about how ideas change is premature, given the paradoxical persistence of growth in the face of rational arguments.

In contrast, a complex systems view of belief systems captures the relational nature of ideas, without making premature assumptions about how they change. From a complex systems view of belief systems, individual concepts such as economic growth do not exist in isolation, but are part of and in relation to a larger web of concepts (Homer-Dixon et al. 2013). Likewise, belief systems can be understood as complex systems, emerging from and co-evolving within their historical, socio-political, and ecological contexts. To understand and explain the paradox of growth, we first need to map the dominant belief system in Canadian federal politics in relation to the thinking and context of the times.

This chapter maps the dominant belief system in Canadian federal politics as expressed through political party manifestos 1867-2017. In the next section, I propose three subjective levels of belief systems, and describe the methods used to identify the relevant features of the dominant belief system. Then, I map the dominant belief system and its subjective levels over seven distinct periods in Canadian history. This analysis demonstrates how the dominant system has evolved over a century and a half and reveals three important insights. First, it identifies several periods characterized by macroeconomic paradigms separated by paradigm shifts during which much of the conventional wisdom was discarded. Second, it shows how despite those paradigm shifts certain elements were retained and persist. Third, as a result of the first two dynamics, elements have accumulated, with new ones layered upon established ones, leading to the increasing complexity of the dominant system. This initial mapping demonstrates how,

despite paradigm shifts, economic growth is one of those elements that was retained and persists. In addition, this chapter provides important historical context to understand subsequent chapters.

Mapping dominant belief systems using political manifestos

In this section, I propose three subjective levels of dominant belief systems, which provides a way to identify the relevant features of the dominant belief system. Political party manifestos 1867-2017 are the main data source. Data analysis and interpretation of these manifestos was organized according to seven distinct historical periods, and involved historical interpretation of these texts to identify elements that correspond to the subjective levels of the dominant belief system.

Three subjective levels of dominant belief systems

According to a complex systems view, belief systems are constellations of emotionally charged concepts that emerge from networks of people and their social and material worlds (Homer-Dixon et al. 2013). Building on this framework, dominant belief systems can be usefully understood to have subjective levels that fall along a continuum from lesser to greater generality, durability, and depth. There are three subjective levels: ideology, consensus, and ontology (Steger and James 2013). ***Ideologies*** are explicit constellations of concepts shared by a group in society at a particular time. As such, ideology is often highly articulated, self-conscious, and may be strongly contested and emotionally charged (Swidler 1986). ***Consensus*** does not imply unanimity, but general agreement, and therefore is less emotionally charged than ideology. General agreement assumes at least some degree of social compromise or power coalition among major actors and groups in society (Gendron 2014). While a social compromise may be partial, it entails at least passive consent from major actors or groups and therefore some degree of legitimacy and possibly institutionalization. This level can include rules, norms, habits, conventions, roles, and relationships. ***Ontology*** includes elements that are assumed or presupposed by other elements. Many elements of belief systems are implicit and unquestioned assumptions that are taken for granted, what Swidler (1986) calls common sense. Presuppositions are elements that are treated as required preconditions of possibility or coherence and are a subset of assumptions. While assumptions are simply elements taken for granted, presuppositions are assumptions that are necessary and prior to other elements.

Assumptions and presuppositions include the basic roles, relationships, and categories of society and worldview upon which all other levels either take for granted or depend. In this way, ***dominant belief systems can be understood as constellations of more or less emotionally charged concepts that include ideological elements, elements of consensus, and ontological elements (Table 3.1)***. This framework provides a way to understand dominant belief systems as complex systems evolving over time, and was used to classify elements when coding manifestos.

Table 3.1. Three subjective levels of dominant belief systems.
(own analysis building upon Steger and James 2013; Swidler 1986)

Level	Characteristics
Ideology	Explicit, contested, relatively fleeting and superficial
Consensus	General agreement among authoritative actors, institutionalized, persistent
Ontology	Implicit, taken for granted, presupposed, durable

Data: Political party manifestos 1867-2017

Canadian federal political party manifestos 1867-2017 were acquired from two data sources:

1. The book *Canadian party platforms 1867-1968* (Carrigan, D.O. 1968. Canadian Party Platforms 1867-1968. The Copp Clark Publishing Company. University of Illinois Press, Urbana), and
2. Political manifestos 1972 – 2015 were downloaded from the Poltext Electronic Manifestos Canada database in the Department of Political Science at the University of Laval: https://www.poltext.org/en/home.

A total of 153 political manifestos were used. These manifestos were from major federal parties in all elections 1867-2017, with only a few platforms unavailable: the NDP 1979 platform was missing, while the Conservative (Con) 1988 platform was only available in French. Major themes from the Con 1988 platform were translated. Manifestos that were available for all major political parties were included, whereas parties that did not have any elected representatives were not included unless an event or discussion meant that the party and its platform gained national relevance. Political parties included the Liberal-Conservative Union (Union), Liberal Party of Canada (Lib), Conservative Party of Canada (Con), Communist Party of Canada (CPC), Labor-Progressive Party (LPP), United Farmers of Alberta (UFA), Co-operative Commonwealth

Federation (CCF), Social Credit Party, New Democratic Party of Canada (NDP), Reform Party (Reform), and the Green Party of Canada (GRN). Citations throughout use these acronyms, accompanied by the year and page number, where platforms 1867-1968 refer to pages in Carrigan 1968 and platforms 1972-2015 reference individual party platforms.

Data analysis and interpretation

Document review of Canadian political manifestos from 1867 to 2017 was used to empirically identify and periodize the dominant belief system in Canada at the Federal level and its evolution over time. Exploring the evolution of the dominant belief system, with particular attention to overarching objectives of the federal government, identified periods of stability and change. This periodization was informed by and built upon previous periodizations in Canadian (Jenson 1990; Riendeau 2007) and international political economy (Zuindeau 2007; Streeck 2014).

Critical analysis of historical texts is a method for tackling historical problems. It involves analysis of historical texts and interpretation of a historical episode (Trachtenberg 2006). Analysis of Canadian political manifestos involved two main steps. First, political manifestos from 1867 – 1968 were coded manually for themes. Text for each theme was put into excel, and later imported into QSR NVivo 12. Political manifestos from 1972 – 2017 were input directly into NVivo and coded for themes. Platforms 1867-1968 were read and coded in their entirety, while due to their greater length only relevant sections of platforms 1972-2015 were read and coded. Relevant sections of platforms included forewords, introductions, tables of contents, titles and conclusions; sections focusing on the economy or natural resources; and sections focusing on or mentioning the environment or economy-environment relationship. Coding used three broad themes: (1) the dominant belief system, (2) economic growth and related elements, and (3) the relationship between the economy and the environment. Coding also included themes that emerged from the data. These themes were designed to capture holistic shifts in thinking, as well as focus on the evolution of economic growth and its relation with the environment.

Second, the dominant belief system and its subjective levels were identified for each period and mapped using Empathica software[4]. Elements for each federal election were categorized according to their subjective level as ideological, consensus, or ontological. Ideological elements were contested by different parties and strongly polarized. Such positions were held by only one party, or held by more than one party but with opposing positions. Elements of consensus were concepts that all parties mentioned and generally agreed upon. For instance, if all parties or the two major parties (i.e. Liberals and Conservatives) were to agree upon an element, while a minor party with few or no elected representatives were to disagree on that element, it would be considered generally agreed upon. Ontological elements were elements presupposed by other elements, or treated as common sense or "the way things are." The relationships or links between concepts were identified and these elements and relationships were mapped using Empathica (Homer-Dixon et al. 2013). These relationships of positive coherence or negative incoherence were identified as textual relationships between concepts. Finally, these concepts were arranged to reflect the subjective layering of the dominant belief system over time, with the oldest ontological elements at the bottom, consensus elements in the middle, and newest ideological elements at the top (Figure 3.1).

Concepts and their relationships for each election were aggregated over a period of several elections, according to the historical periods. This aggregation was used because parties may not articulate all concepts of their belief systems every election, even though the dominant belief system may remain stable and persist over many elections. Instead, political parties often focus on practical solutions and ideologically contested positions that distinguish them from other parties. They may only deeply reflect and articulate their vision, principles and core values periodically. Thus, dominant belief systems and their subjective levels may be observed more clearly and completely when concepts and relationships are aggregated over periods of several elections. Results are organized by theme and presented according to the periodization, as well as the subjective levels of belief systems (ideology, consensus, and ontology). Cognitive-affective maps (CAMs) illustrate major features of the dominant belief system in periods of stability.

[4] Empathica is a software program designed to develop cognitive-affective maps and can be used to map belief systems. It is available at http://cogsci.uwaterloo.ca/empathica.html.

The dominant belief system in Canadian federal politics 1867-2017

0. Pre-confederation

Although Canada was discovered for the third time by Europeans, after First Nations and the Scandinavian Norse, it was European settlers that most drastically shaped the land through colonialism. Following European exploration in the late 15th to 16th centuries, French and then British settlers founded colonies that would become Canada. These colonies were diverse, with different peoples, geographies, ecologies, histories and relationships with First Nations (Riendeau 2007).

Even still, the Canadian colonies were all born under the wings of colonialism, and grew up under the wings of the European Enlightenment and modernity. Colonies were sources of resources for European empires and the Canadian colonies were commercial ventures through the fur trade, cod fishery, and forestry (Riendeau 2007). Indeed, the Pacific Northwest Company and The Hudson's Bay Company controlled vast stretches such as Rupert's Land. With colonialism came European Enlightenment thinking. Inspired by European political ideals, the colonies were built upon and adopted political philosophies such as republicanism and liberalism. They held up ideals about the separation of the church and state, Cartesian dualism that separated the mind and body, of private property as the improvement of wild land, and of the domination of nature (White Jr. 1967).

As colonies that ended up under British imperial rule, conflicts with First Nations, between France and Britain, and then between Britain and the United States were of perpetual concern. These concerns were heightened with the rise of American Manifest Destiny in the 1800s and the American civil war. Manifest Destiny was a widely held set of beliefs in the United States that American settlers, endowed with special virtues, were destined to expand, settle, and remake the West in the image of an agrarian utopia. These beliefs drove the territorial expansion of the United States from 1812-1860, which was viewed as a threat to the British held colonies. Following the American civil war, the United States had the largest standing army in the world. This threat to the Canadian colonies was driven home by the Fenian raids from 1866-1871. During these raids Irish-American civil war veterans called Fenians made armed attacks on Canada in attempts to take it hostage and trade it for Ireland's independence (Riendeau 2007).

Although the Fenians were repelled, the American threat mobilized support for the security, sovereignty and expansion of the union of colonies.

1. National Integrity (1867-1878)

With its founding as a sovereign nation state, Canada was seen as a fragile union, threatened by the expansion of its much larger neighbour to the South. This union only included Ontario, Quebec, Nova Scotia and New Brunswick, with vast expanses held by the Hudson's Bay Company to the west and north called Rupert's Land (Riendeau 2007). The union of former colonies saw their survival as dependent upon nationhood. Under Conservative leader Sir John A. MacDonald the Liberals and Conservatives formed the Liberal-Conservative Union (Union) in support of confederation. The Union was opposed by the Reform party, and the Liberals broke from the Union shortly after confederation.

The dominant belief system in Canadian federal politics

Within this context, the major focus of the government was on national expansion; securing Canada's territory through immigration, settlement, and the development of the nation's lands and natural resources; and developing the institutions and infrastructure to carry out this vision. Partisan debates centered on how best to secure national integrity and the two parties mainly differed in how it should be done: a government formed through the union of parties (Union 1867, p2) or simply through representation by population (Reform 1867, p5). Other debates were about national integrity issues, including the militia and legal system, as well as infrastructure pertinent to national security such as canals and railways (Con 1872, p10; Lib 1872, p9).

There was also significant consensus. Both main parties supported confederation, expansion of Canada's territories, European immigration and settlement to develop (cultivate) the land. Parties thus advocated for the "speedy opening up for settlement and cultivation of the great North Western Territories" (Reform 1867, p6), and encouraged settling of "wild land" through "rapid occupation of the soil by a hardy and industrious population" (Reform 1867, p6). This consensus was linked to national survival and integrity in the form of defensive expansionism in the face of the American threat. The Union party argued to "include Newfoundland and PEI is essential to the prosperity of the Dominion" (Union 1867, p2). They

claimed expanding the union to include British Columbia would protect the nation "If the United States desires to outflank us on the West" (Union 1867, p2). Similarly, the Reform party declared it "entertains the day" when PEI and BC "will form a part of the Dominion of Canada" (Reform 1867, p6).

Underlying these objectives were certain ontological assumptions and presuppositions. These ontological elements included colonialism, the sovereignty of the nation state, Locke's concept of private property, and the domination of nature captured in views of untamed nature needing to be occupied, developed and improved. For instance, this complex relies on the Enlightenment idea, following John Locke, that land that has been settled and improved by human labour becomes private property. Locke's particular notion of private property is presupposed in the objectives of aiding settlers in securing titles through the "speedy opening up for settlement and cultivation of the great North Western Territories" (Reform 1867, p6) and to encourage settlement through "rapid occupation of the soil by a hardy and industrious population" (Reform 1867, p6). The domination of nature is implied in the cultivation of "wild lands." Similarly, private property as ownership derived from improvement through human labour and the domination of nature are presupposed when parties supported enterprising explorers to "promptly and easily secure the fruits of their labour" which "would speedily produce an immense development of the mineral industry" (Reform 1867, p6). Finally, the provinces were referred to as – and in fact had previously been – colonies (Con 1867, p2; Reform 1867, p6). Colonialism is an ontological element because colonies are simply treated as the way things are.

Thus, the dominant belief system in the National Integrity era reflected ideological debates about the means to national integrity, but many features such as immigration, settlement, development of the land and expansion of the territory held consensus (Figure 3.1). These features in turn presupposed ideas of colonialism, sovereignty, private property and the domination of nature.

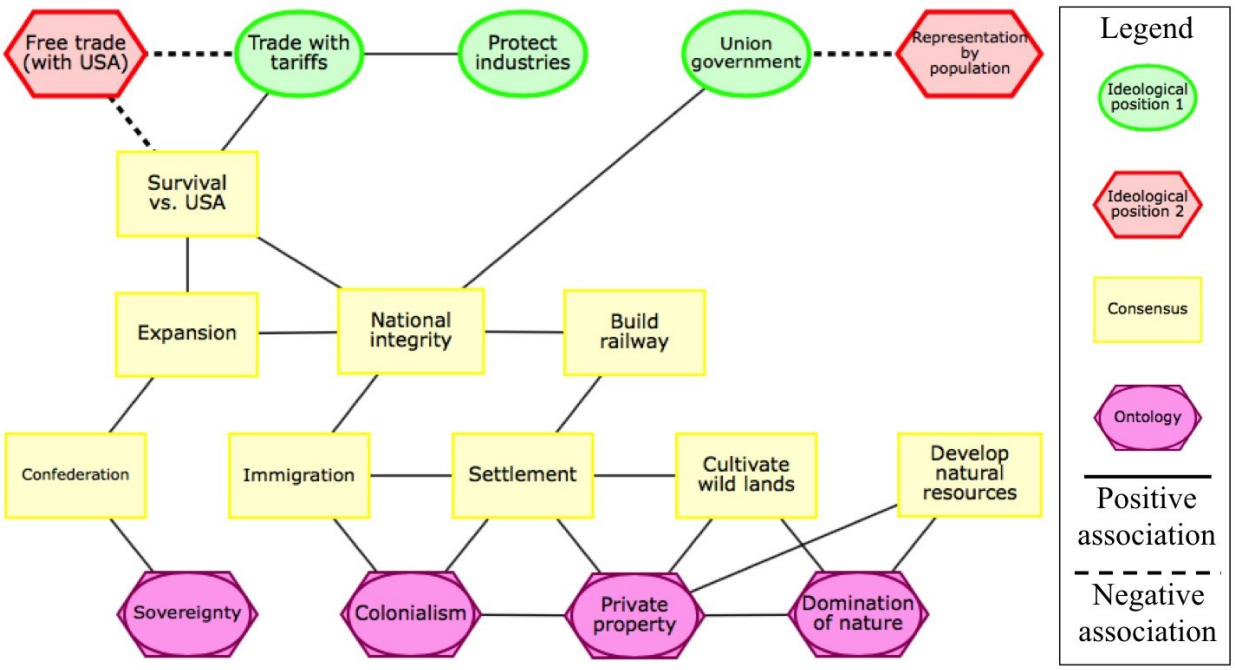

Figure 3.1. The dominant belief system during the National Integrity era (1867-1878) Elements of the dominant belief system are represented by polygons. These elements are connected by positive or negative associations indicated by solid or dashed lines respectively. Purple hexagons are ontological elements and yellow rectangles are consensus elements. Red hexagons and green ovals are ideological elements, with colours reflecting the ideologically opposed positions.

2. The National Policy era (1878-1929)

John A. MacDonald's Conservatives introduced the National Policy in 1878 as a solution to economic problems and depression. This policy advocated for a protectionist tariff and against free trade, relying on excess production from Canadian agriculture and natural resources to export to the British Empire. Initially, it consisted of a protective tariff to stimulate Canadian industries, a transcontinental railway network, and settlement of the West (Riendeau 2007). Although these three objectives predated confederation, MacDonald packaged them into a nation-building scheme with a distinct identity that remained "the fundamental strategy of Canadian economic development for more than half a century" (Riendeau 2007, p194).

The National Policy orchestrated national unity through the interdependence of rural agriculture and urban manufacturing as the country was settled, urbanized, and industrialized. A transcontinental railway was promised to unite the country, settle the West and mobilize the military to defend Canada (Riendeau 2007). At the same time, the protective tariff stimulated

Eastern manufacturing, which supplied goods for Western agriculture, even while employing a growing urban population that would need agricultural produce from the West. Under the National Policy these two groups came to rely on each other for sustenance on one hand and for manufactured goods on the other. MacDonald's reign ended in 1896, and so did support for the National Policy.

Despite the change in government and the Liberals' efforts to institute reciprocity (free trade) with the USA, the National Policy remained the dominant macroeconomic policy framework. This framework would evolve and persist until the Great Depression and WWII. The National Policy grew to encompass a much greater scope, and provided the foundation for industrialization and development of the factory system in Canada. Prior to 1900, the population of Canada had not grown as its leaders hoped. The Great Boom of 1900-1913 was characterized by rapid immigration, settlement of the West, and economic growth tied to increases in wheat production, and the growth of Canadian industrial capitalism (Bothwell et al 1987). In 1905 Alberta and Saskatchewan joined the Dominion of Canada, and European immigration was strongly encouraged. Between 1900 and 1913 Canada's population grew 86% from 5.3 to 7.6 million. Before the 1900s, Canada was predominantly a rural nation, but Canada experienced significant and rapid urbanization and industrialization.

The dominant belief system in Canadian federal politics

The National Policy, advocated by the Conservatives, had several dimensions that were contested by the Liberals. The Conservative way of thinking is evident in the following:

> As in 1878, in 1882, and again in 1887, so in 1891, do questions relating to the trade and commerce of the country occupy a foremost place in the public mind. Our policy in respect thereto is to-day what it has been for the past thirteen years, and is directed by a firm determination to foster and develop the varied resources of the Dominion... consistent with Canada's position as an integral portion of the British Empire (Con 1891, p29).

The central debate was between protective tariffs, while exporting staples to the British Empire, versus free trade (reciprocity) in exporting staples to the United States (Figure 3.2). Linked to the tariff versus free trade debate, protectionist and populist sentiments for and against immigration

surfaced. Economic problems brought support for Chinese labour, but also populist sentiments against immigration. In 1882 the Conservatives decried people of "different race, of a different cast of mind, of inferior civilization, and lower morals. I think it would be misfortune if we had our country permanently peopled by a population of this kind [Chinese labour]" (Con 1882, p22).

These ideological debates around the National Policy rested on consensus among parties about the underlying societal objectives: to settle and develop the land, and produce excess staples for export. In 1887, the Conservatives argued that developing industries was the way to prosperity: "we shall endeavour so to develop the industries of this country as to make it one of the most prosperous nations on the face of the earth" (Con 1887, p24). By 1891, this consensus had evolved from settling and developing land and exporting surplus production to developing Canadian industries as a basis for self-sufficiency and prosperity. Throughout this period, a consensus emerged on industrialization and development. General agreement on the role of the government increasingly centered on national infrastructure (railways, canals, transportation networks), public services, and industry, despite ideological disagreement about whether infrastructure should be publicly or privately owned (Lib 1908; Con 1908).

Elements presupposed by this consensus included those established during the National Integrity era. This can be seen in the Liberals' motto: "The Land for the Settler; The Price for the Public" (Lib 1882, p20), referring to the North-West railway land grant policy for settlers. This complex presupposes immigration, settlement, and the development of the land by settlers. Similarly, colonialism is presupposed in aligning Canada with the British Empire as articulated by the Liberals: "Unity with the rest of the empire" (Lib 1887, p24). Importantly, elements previously supported through political consensus during the National Integrity era had become ontological elements presupposed as the way things were (Figure 3.2).

As the Great Boom progressed, ideological debates were between public good versus excessive profits and between public versus private ownership of railways and other national infrastructure, both of which reflected debates between capitalism and socialism. Meanwhile, immigration, settlement, development of the land, and industrial expansion were not only taken for granted but also came to pass. The Conservatives voiced the goal "…that our wild lands would be speedily populated by progressive farmers, these in turn providing manufacturers and merchants with an increased home market, and so stimulating every branch of industry in the

Dominion" (Con 1900, p44). Similarly, the Liberals observed, the "immense plains west of Lake Superior, which remained idle from the seventeenth century up to thirty years ago, are being peopled by hundreds of thousands of settlers" (Lib 1904, p46). Parties were active in promoting this societal project, "opening up traffic to the north, where generations to come will be able to settle and make their livelihood" and referred to this project as a "great work" (Lib 1908, p50).

From 1917 until the Great Depression, major shifts occurred. In 1917, war was the dominant election issue, and ideological debates were highly polarized. Conscription was the main election issue, with the fault line between French Canadians opposed to conscription and English Canadians in favour. Partly driven by war debts, the economic situation of the country and unemployment rates entered political discourse. The 1921 election was a time of renewal and change, with a new party (the Progressive Party), new platforms, and new leaders. Women had just won the right to vote; industry had become a key link in Canadian economy, although its dominance was not uncontested by agriculture; and Canadian economic policy (trade export) was driven by the need to pay off the nation's war debts.

Despite these changes, the National Policy persisted and continued to presuppose elements of the National Integrity era, including colonial policy of immigration, settlement, and development of land and other resources. For instance, in 1917 the Conservative (Union) party called for immigration and colonization policy to "induce settlement upon the land, to encourage increased production, and to aid in the development of agricultural resources" (Union 1917, p74). Similarly, for the Liberals prosperity depended on the development of resources, which in turn required population increase and immigration: "development demands a rapid increase in the population" (Lib 1917, p69). And in 1921, the Liberals continued to talk about "a judicious and vigorous immigration and colonization policy" as important to solve the country's problems (Lib 1921, p83-84). The Conservatives stayed with their protectionist Canada First policy for both 1925 and 1926. National Policy thinking – settlement, immigration, development of natural resources for export and protective tariffs – continued to dominate.

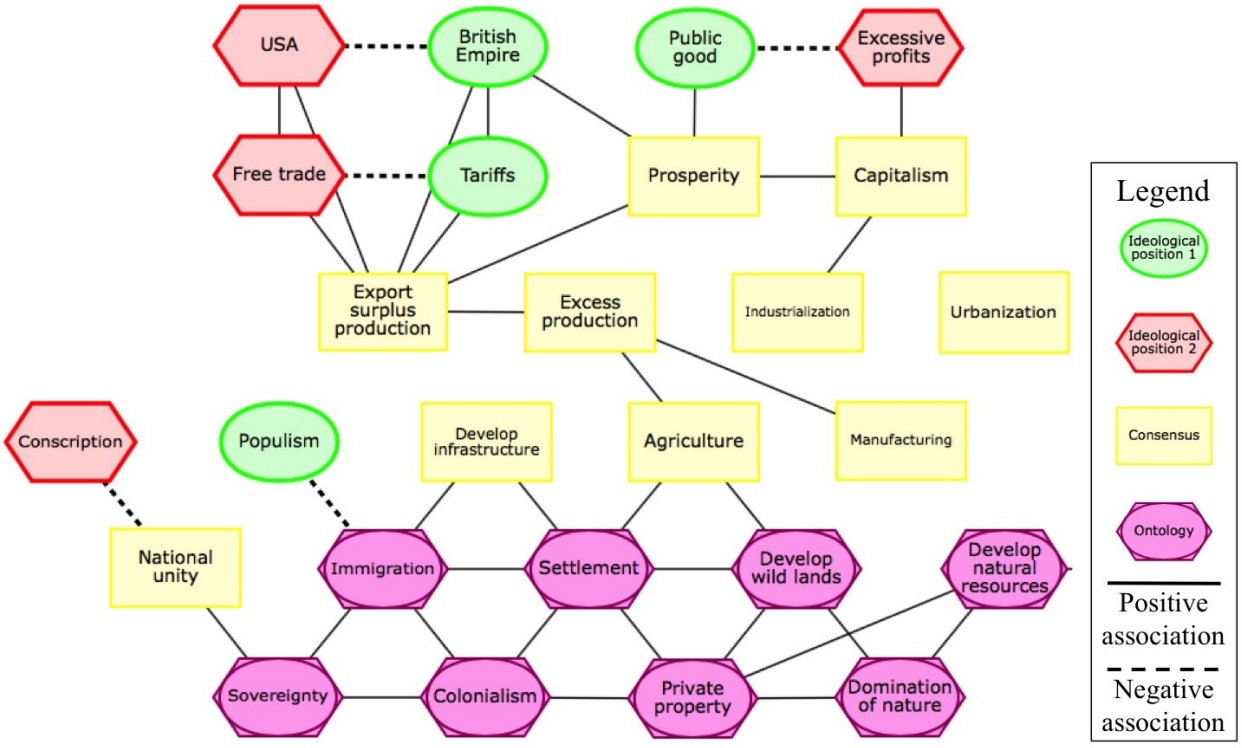

Figure 3.2. The dominant belief system during the National Policy era (1878-1929)
The National Policy is characterized by ideological contestation between free trade with the USA versus protective tariffs and trade with the British Empire. Consensus led to Canadian manufacturing, industrialization, and urbanization. Some elements that held consensus in the National Integrity era had become ontological – the way things were. By the end of this period the colonial project of immigration, settlement of the West, and nation building through railways was complete.

3. The Great Depression and WWII (1929 – 1945)

The period from 1929-1945 was a tumultuous time characterized by hardship and societal unrest of the Great Depression and WWII. The Great Crash of October 1929 brought galloping stock markets to a halt. Production and consumption fell dramatically, as did exports. From 1929-1933 real national output fell by 30% (Bothwell et al. 1987). Elected in 1930, R.B. Bennett and the Conservatives would face the fallout. What followed was the Great Depression, a decade-long period during which millions of Canadians were left unemployed, homeless and unable to feed themselves. This decade, called the Dirty Thirties, is most memorable for the dust bowl in the prairies, at a time when Canada was heavily dependent upon exports of raw materials and agricultural products. These hardships triggered social welfare and populist movements, and legitimated a more interventionist role for government to help the urban unemployed, the rural

poor and farmers facing drought. British Empire settlement subsidies were cancelled, while recruitment and promotion of immigration were stopped (Bothwell et al. 1987).

The political landscape shifted as the public lost faith in the traditional parties. Two new parties were added: the democratic socialist Co-operative Commonwealth Federation (CCF) founded in 1932 and the populist Social Credit party in 1935. Too late, R.B. Bennett's proposals for a Canadian New Deal fell flat and in 1935 the overriding issue of the campaign was again unemployment. The Liberals proposed to set up a national commission to deal with unemployment and Bennett was replaced by Mackenzie King's Liberals.

Then, on September 1, 1939 Hitler invaded Poland. Britain and France declared war on Germany within days. Canada would follow by September 10, 1939. The war dominated the 1940 election and King held power. The conscription crisis was "the most serious political challenge for the wartime cabinet" (Bothwell et al. 1987, p333). Conscription divided French and English speaking Canada, and Mackenzie King's hands were tied with his promise that conscription would not be imposed. In the spring of 1942, King sought approval for conscription through a national vote, where 84% of Canadians supported it but 90% of French Canadians opposed it (Bothwell et al. 1987). The issue again came to a head within the Liberal cabinet in November 1944, with King finally conceding to adopt conscription. The issue would become moot with the collapse of Nazi Germany in the spring of 1945.

This period was accompanied by major shifts in Canadian life. Canada underwent a massive reorganization of its economy, from largely agricultural-based to industrialized, and the birth of the modern civil service (Granatstein 1998). This reorganization was spurred by WWII, and led by C.D. Howe, dubbed "Minister of Everything." Howe would continue this work after the war through post-WWII reconstruction and development.

The dominant belief system in Canadian federal politics

In the wake of the 1929 stock market crash, unemployment dominated the 1930 election. The National Policy remained central in the unemployment debate. Bennett's Conservatives supported protective tariffs and opposed free trade:

> You have been taught to mock tariffs and applaud free trade. Tell me, when did free trade fight for you? Tell me, when did free trade fight for you? You say our tariffs are only for

> the manufacturers; I will make them fight for you as well. I will use them to blast a way into the markets that have been closed to you (Con 1930, p111).

Bennett also promised national works, to restrict immigration, and "a plan for greater empire trade based on mutual advantage" (Con 1930, p110). In contrast, the Liberals advocated for export of excess production to world markets under free trade (Lib 1930).

In 1935, polarized debates emerged, with parties adopting positions that were strongly opposed. The new CCF party supported public ownership, but opposed capitalism, private profit, unregulated private enterprise and competition, economic inequality, financiers and industrialists. Declaring, "Capitalism has failed" (CCF 1935, p119), they promised to get rid of capitalism and replace it with a planned socialist economy. They would establish a "planned, socialized economic order" to develop "the national resources and the most equitable distribution of the national income" (CCF 1935, p122). The Conservatives responded, "We will get nowhere by recklessly and stupidly clouting capitalism into a paralysis of ineffectiveness. Treat capitalism decently, not for its own sake but for your own sake. For it can serve you well" (Con 1935, p119). They rejected anything associated with communism or socialism, declaring, "Moscow pays its agents and pays them well, but Canadians will never tolerate any interference from the outside" (Con 1935, p118). They also rejected socialist proposals: "There is no room in the same country for socialism and liberty" (Con 1935, p119).

In both 1930 and 1935, major parties also agreed upon many elements. In 1930, parties promised development of natural resources and agriculture, industry, and the export of surplus production as a means to ensure national welfare within their national policy thinking. The Conservatives declared "We pledge ourselves to a policy of protection for Canadians in the development of our national resources, our agricultural and industrial life, and our consumers from exploitation" (Con 1930, p110). The Liberals continued with tariff policy to "encourage production at home and the marketing of our excess production abroad" (Lib 1930, p112). By 1935, the consensus had shifted, with all parties calling for a better distribution of wealth, but also based on supporting natural resources and industry. For instance, the CCF lauded Canada's "great natural resources" that, they claimed, "are so vast as to be capable of paying off the national debt in 25 years" (CCF 1935, p131).

In 1940, national unity and wartime support for Canada's allies occupied parties. All parties supported the war effort, but differed widely on how Canada should do this. Conscription

and national unity were major debates. King's Liberals supported war involvement but were against conscription (Lib 1940, p139). The Conservatives supported involvement through "A united and aggressive War effort, in tune with the realities of the situation" (Con 1940, p137). They called for "A full mobilization of Canada's material resources, with War materials produced and purchased in Canada as far as possible" (Con 1940, p139). Meanwhile, the CCF was pacifist. They took a strong stand against conscription and were only in favour of providing material aid in the war.

In sum, crises and persistent problems dominated federal politics from 1929-1945. These problems were initially dealt with using the dominant thinking of the national policy. However, established solutions proved insufficient for the severity of the Great Depression and WWII. Although this period began with national policy thinking, it was gone by the end. Importantly, ideas expressed in party platforms evolved quickly, and much of the consensus and ontological elements of the previous period were either absent or unspoken.

4. Post-WWII reconstruction and development (1945 – 1970)

Significant changes in international relations brought an end to elements upon which the National Policy rested and new approaches emerged after WWII. These changes included the end to colonial empires, the beginning of de-colonization in places such as Africa, and a new balance of power reflected in the United Nations. With Bretton Woods and the linking of the gold standard with the USD, protective tariffs were rejected, signalling a turn to global economic openness. This shift was institutionalized through the Bretton Woods institutions – the International Monetary Fund (IMF) and World Bank – as well as the General Agreement on Tariffs and Trade (GATT) in 1948, later replaced by the World Trade Organization (WTO) in 1995. Characteristic elements of the National Policy no longer fit this global context. Neither defensive expansion, alliance with the British Empire, nor protective tariffs made sense. In its place, this period saw the emergence of a system of industrialized mass production often called Fordism, mass consumption, a post-war compromise between capital and labour, Keynesian macroeconomic policies and the rise of the welfare state (Jenson 1989).

The dominant belief system in Canadian federal politics

New directions: post-WWII reconstruction and development (1945-1958)

A new macroeconomic approach was established post-WWII that diverged significantly from the National Policy. In 1945, as the war wound down, there was a general optimism and consensus around post-WWII reconstruction and development. All parties agreed on a complex of ideas that centered on promoting full employment. In this new consensus, the role of government was to maintain the national income (full production) to ensure full employment. For the Liberals, employment and jobs were the federal government's responsibility and they promised "to see that every Canadian after the war shall have a wide-open chance to make a real success of his life" (Lib 1945, p157). Listing their policies, they declared, "Every one of the following 12 steps affects your job - no matter what it is - after the war!" (Lib 1945, p157). The Conservatives declared, "The objective is full employment - jobs for all" (Con 1945, p160), while the CCF asserted that jobs and adequate income for all "must be the central aim" (CCF 1945, p143). Even the Labor-Progressive (Communist) party promised to maintain "the high level of national income that has been achieved during the war" (LPP 1945, p151). Thus, core to this new post-WWII direction was the government's responsibility for full employment by encouraging full production.

Although it represented a rejection of and departure from the core elements of the National Policy, this belief system was still based on previously established foundations laid down in the National Integrity and National Policy eras. Parties emphasized developing Canada's natural resources, industrialization, and agricultural and industrial production as the basis for consumption and export trade to deliver full employment and improve standards of living (national income). For instance, for the Conservatives natural resource development was linked to consumerism and export of resources. They argued for the need to "vigorously develop our vast natural resources" and increase consumption to create employment (Con 1945, p164). In 1949, all parties based such proposals on development of natural resources. For the Liberals, employment and a high standard of living depended on resource production, industry and trade. From 1949-1957 they emphasized the "aim of attainment of a high and stable level of prosperity and employment and income by encouraging agriculture, industry and trade" (Lib 1949, p186). Similarly, the Conservatives declared, "We believe that the greatest assurance of employment in

Canada is based upon the fullest development of our resources which will create new employment…and increase the domestic market" (Con 1949, p189-90). And the CCF promised to provide social security, healthcare and housing for all based on resource development: "Canada's wealth and resources are sufficient to maintain a high standard of social security" (CCF 1949, p168) through economic policies that "will help maintain a high rate of production and a high national income" (ibid, p168).

In turn, this consensus presupposed even more deeply established elements such as immigration, the domination of nature, and the colonial frontier mentality. The Labor-Progressive view of natural resource development embedded a utilitarian relationship of domination of nature: "Canada's tremendous natural resources of oil, metals, coal, fisheries, forests, land, water power and uranium must be harnessed to serve the needs of Canada's people" (LPP 1953, p207). Immigration continued to be seen as essential for industry, natural resource development, and Canada's growth and prosperity: "The active development of our natural resources - the creation of greater secondary industries - the whole future of the economic development that has made Canada a prosperous and growing Nation - all are dependent on a sound and active programme of selective immigration" (SocCred 1957, p234). And colonialism was a reality of the past, but the frontier mentality persisted: "Whereas Sir John Macdonald was concerned with opening the West, we shall be concerned with the developments in the Northern Frontier" (Con 1957, p228). Thus, elements that were to become the growth-based welfare state were layered upon these pre-existing elements established during the National Integrity and National Policy eras.

The increasing polarization of Cold War politics

The Truman Doctrine was put forth in 1947 as an American foreign policy to counter Soviet threats and communist expansion. By the 1949 election the Cold War had begun. As the Cold War set in, ideological elements became increasingly polarized. All parties except the Communist Party juxtaposed their visions against communism (Figure 3.3). The Liberals declared, "Liberalism is diametrically opposed to Communism" (Lib 1949, p181), while the Conservatives declared communism "anti-Christian" and proposed to make amendments to the Criminal Code to "deal effectively with those who are working to establish a Communist dictatorship here in Canada" (Con 1949, p188). In contrast, the CCF juxtaposed their preferred

vision, democratic socialism, against a "communist dictatorship" (CCF 1949, p177). Thus, the political consensus in Canada fell on the side of the cold war that favoured capitalism, liberalism, and democracy.

In this context, the major parties began to define their political identities, often through increasing polarization and emotional appeal. They adopted distinct, competing positions that reflected larger political and philosophical debates. The Liberals argued that liberalism was a philosophy of individual freedom, but also of free markets and expanding trade as the foundations for prosperity and progress. The Conservative emphasized an ethos of economic freedom:

> Economic freedom will promote thrift, foster and encourage qualities of self-reliance, industry, and initiative which have brought this nation to its present enviable position. It will preserve and improve our standard of living (Con 1949, p188).

The Conservatives explicitly linked capitalism and democracy, emphasizing the connection between economic freedom and political freedom: "Economic freedom is the essence of competitive enterprise, and competitive enterprise is the foundation of our democratic system" (Con 1949, p188). In contrast, the CCF advocated for democratic socialism. They derided monopoly, profit, and economic dictatorship, while calling for public ownership and economic planning (CCF 1949).

The CCF more clearly developed its philosophy in the Winnipeg Manifesto of 1956. The CCF declared "Private profit and corporate power must be subordinated to social planning designed to achieve equality of opportunity and the highest possible living standards for all Canadians" (CCF 1957, p215). Private corporations, excessive wealth, and private profit were rejected in favour of social planning. The CCF's denunciation of private profit and capitalism was explicitly moral: "Economic expansion accompanied by widespread suffering and injustice is not desirable social progress" (CCF 1957, p216). They declared, "A society motivated by the drive for private gain and special privilege is basically immoral" (CCF 1957, p216). The immorality of capitalism and the "scramble for profit" was the cause of waste and despoilation of Canada's resources (CCF 1957, p215). Thus, in the context of the cold war, the Liberals, Conservatives, and CCF all developed strong ideological positions with clear emotional and moral dimensions.

Economic growth, national unity, and the welfare state (1958-1968)

In 1958, the Diefenbaker revolution took hold, while Quebec nationalism emerged as a major national issue. Of the major parties, only the Liberals put forth a new vision in 1958. This vision emphasized freedom and championed economic growth as a means to achieve freedom. The Liberals promised that an "expanding" and "vigorous economy" would deliver "full employment and rising standards of living for all" (Lib 1958, p245). Their position on economic growth was rooted in and built upon the consensus of Post-WWII Reconstruction and Development, including natural resource development, developing infrastructure, export trade, and an industrial society organized around production and consumption (Figure 3.3). Their materialist notion of prosperity was rooted in increasing production and consumption, and the ethos of consumer society: "More than ever before, Canadians produced and consumed the good things in life and at the same time saved and ploughed back their savings into the development of our country and its resources" (Lib 1958, p252). The Liberals linked this vision to the previously established consensus on natural resource development, industrial expansion, and increased foreign trade, and promised more of the same. They observed the "spectacular development of our resources and industries brought unparalleled expansion which made Canada the envy of the world. They raised Canadian incomes to record high levels, and achieved record employment" (Lib 1958, p245).

The Liberals' ideas presupposed even deeper layers that all parties agreed upon. A major objective that held general agreement was development of Canada's natural resources in the North. For example, the Conservatives put forth their "Roads to resources" plan for Northern development. This consensus, focusing on economic issues and Northern development, presupposed previously established elements such as natural resource development and colonial settlement. The Liberals aimed "to assure maximum development of our natural resources in every part of the nation" (Lib 1958, p246), while the CCF promised to assist "in the orderly development of the resources of the country" (CCF 1958, p256). The Liberals also articulated that Northern development was seen as an extension of the colonial project of frontier development. They suggested this vision could "stimulate the flow of ideas across Canada, stressing the romance of Canada's history, and the story of her frontier development and of the frontiers that still exist" (Lib 1958, p245). In this way, the emerging obsession with economic

growth and jobs was premised upon Canadian industrialization and resource development, but also a colonial frontier mentality.

Economic recession hit in 1962, and in the 1963 election the Liberals' promise of progress and prosperity through economic growth won the day. The Liberals defined a hierarchy of three core objectives, with growth as the central element: unity, growth, and prosperity (Figure 3.3). Unity included co-operative federalism, with symbols of national unity such as the flag and anthem. Growth followed and contributed to national unity: "The second aim of Liberal policies is to increase our national wealth. We need a vigorous economy. We need new industries. We need more trade. These are the foundations on which we can enjoy increasing incomes and expanding opportunities for a better life" (Lib 1963, p295). Prosperity followed from growth. Prosperity meant full employment, education, training, working conditions, security, services, and other elements of the welfare state. The role of the government had evolved and expanded, from full employment to managing the growth of the economy so as to provide for the welfare of society. The primary objective and role of the government was to ensure continued economic growth. Other parties adopted similar views about the responsibility of government to deliver growth. The NDP declared it "will plan for continuous growth, for a dynamic, expanding economy" (NDP 1962, p279), while the Social Credit Party promised "To assure the economic climate essential for growth of agriculture and industry and development of our resources" (SocCr 1965, p325). Thus, following its introduction by the Liberals, growth was soon agreed upon.

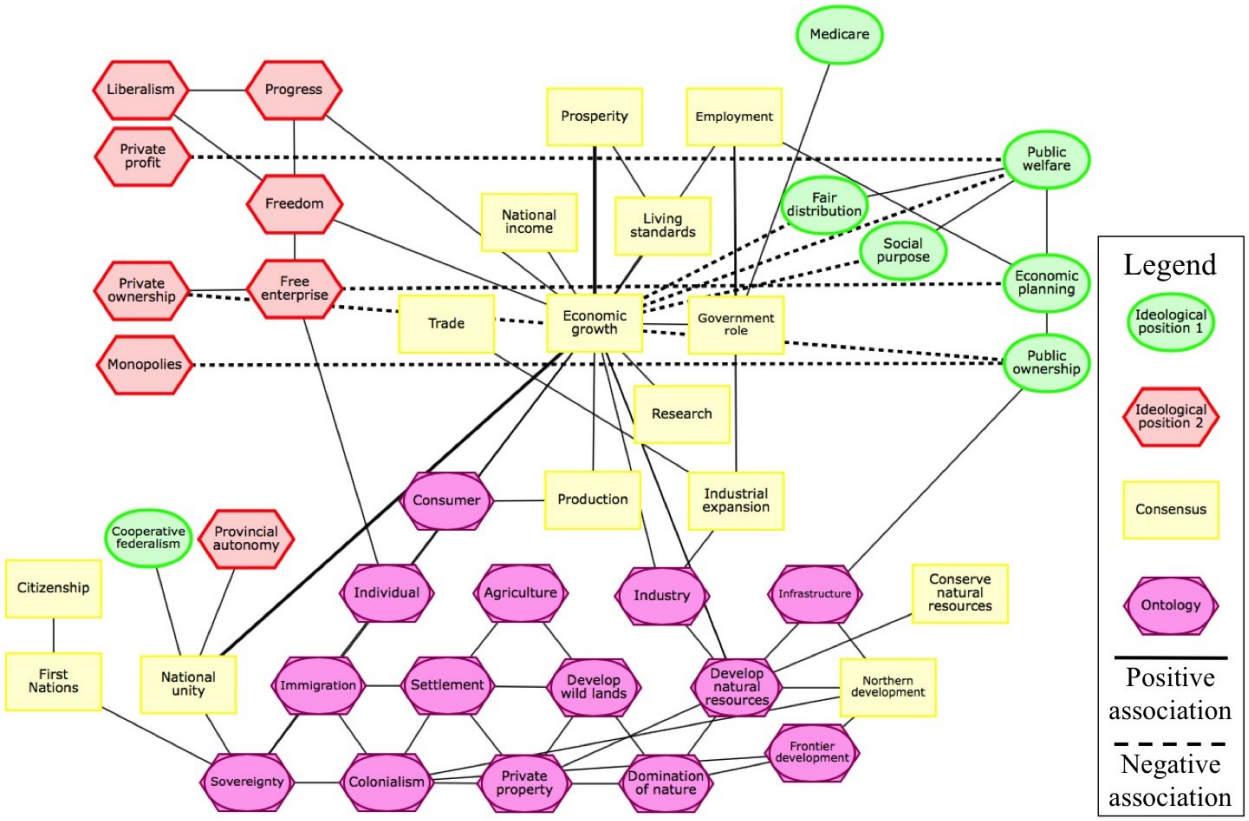

Figure 3.3. The dominant belief system in Canadian politics in 1963
Green and red elements separated by dashed lines illustrate Cold War polarization between free market capitalism and social democratic ideologies; yellow rectangles illustrate consensus among parties on economic growth, employment, national unity and welfare state programs; purple hexagons are ontological elements assumed or presupposed by the rest of the dominant system. Stronger bold lines indicate explicit hierarchy of priorities articulated in Liberal platform (national unity, economic growth, prosperity).

In sum, in the 1945-1970 era a new macroeconomic consensus emerged, based on post-WWII reconstruction and development. This consensus emphasized the development of natural resources, industrialization, full production, consumption, and export trade as the sources of national prosperity and full employment. At the same time, polarized debates emerged with cold war politics. Polarization fractured along ideological lines: political liberalism, free market capitalism, and social democracy were distinct and all opposed to communism. While cold war debates simmered, the growth economy and welfare state programs remained uncontentious and were quickly embraced. While parties departed from the National Policy, they did not discard all layers laid down since confederation, but retained many consensus and ontological elements from the National Integrity and National Policy eras. This dominant belief system continued to

be based on immigration, settlement, development of natural resources, but also industrialization, export trade, and increasingly capital-labour relations and capitalist production and consumption.

5. The tumultuous Trudeau years (1970 – 1982)

By 1970 Canada had entered a turbulent time. National unity, the economy, and energy would occupy the political spotlight throughout the Trudeau era. The 1970 October crisis was emblematic of the end of the Trudeau's honeymoon. In October 1970, the Quebec nationalist group Front de libération du Québec kidnapped provincial Deputy Premier Pierre Laporte and the British diplomat James Cross, provoking P.E. Trudeau to implement the War Measures Act. Separatist sentiments would be further flamed with the 1976 election of the Parti Quebecois under Réne Lévesque.

Shortly after the October crisis, economic and energy issues took priority as the sun set on the post-WWII era. Supported by Bretton Woods institutions, the international economic order had remained stable since WWII. In Canada, as elsewhere, this order had long been based on Keynesian economics, with emphasis on the welfare state, and ideas about the balance between employment and inflation during recession (Dimand 2008). However, globally, countries faced increasing unemployment and inflation, and in the spring and summer of 1971 several European countries left the Bretton Woods system of fixed exchange rates, precipitating the Nixon Shock. This shock was series of economic measures, most notably President Nixon's removal of the direct convertibility of the USD with gold, that effectively ended the Bretton Woods system. Inflation rates and living costs in many developed countries continued to rise and Canada was no exception.

In 1972, P.E. Trudeau's Liberals eked out a minority victory over Robert Stanfield's Conservative party, and formed government with the support of the NDP until 1974. During this minority government, the OPEC oil crisis of 1973 brought economic instability, rising energy prices, and concerns over energy security. In late 1973, the Organization of the Petroleum-Exporting Countries (OPEC) restricted the supply of oil to raise its price. The OPEC oil crisis began in October 1973 and lasted until March 1974, causing the price of oil to increase dramatically. The oil crisis compounded an already troubled economic situation. Crop failures in several countries and the OPEC oil crisis drove up food prices and energy costs respectively. Moreover, the OPEC oil crisis landed amid Western countries' fears of rapidly depleting oil

reserves and the threat of global energy shortages (Toye 2014). To already spiralling inflation and increasing costs of living were added increased oil prices, gasoline shortages, and line-ups at the pumps. These fears combined with concerns about foreign ownership and control brought to light by the 1957 Royal Commission on Canada's Economic Prospects (the Gordon Commission) to produce calls for energy security and energy independence (Riendeau 2007). After 1973, economic and energy issues would remain entwined, and environmental policy would be predominantly framed in relation to energy security and independence.

Trudeau's Liberals soundly won the 1974 election but economic issues persisted. To deal with persistent inflation and energy issues, the Liberals implemented price and wage controls and created Petro-Canada in 1975. The Conservatives put forth Joe Clark, who won the 1979 election on promises to deal with high mortgage rates and housing issues, only to face a second OPEC oil crisis, stagflation, and defeat to Trudeau's Liberals by 1980. The Liberals continued to wrestle with economic issues, while their 1980 National Energy Policy would sow the seeds of Western alienation across the prairies. These economic troubles were not resolved until P.E. Trudeau adopted neoliberal policies in 1982 (Bothwell et al. 1989).

The dominant belief system in Canadian federal politics

In this context, parties focused primarily on the pressing economic and energy problems of the day, with relatively little attention paid to issues and debates of the previous era. By the 1972 election, global economic recession had taken hold, and with it the worst recession in Canada since 1930. Economic growth remained one main objective, but for all parties so were inflation and unemployment. Stagflation – low growth and high unemployment combined with high inflation – broke with the common understanding that jobs and growth would increase at the expense of inflation, but that inflation would decrease if growth slowed. All parties agreed that the main problem was the relationship between economic growth, employment and inflation, although they disagreed on what to do about it, each arguing that their approach would deliver prosperity. The Liberals' four objectives were to strengthen national integrity, ensure economic growth, provide for personal fulfillment, and extend social justice (Lib 1972, p2). Economic growth and full employment were intimately entwined. Under their objective, "working together for economic growth", the Liberals declared, "The social goal of Liberal economic policy is full employment" (Lib 1972, p5). Managing the relationship between economic growth, inflation,

and unemployment was also central for the Conservatives. The Conservatives emphasized five macroeconomic goals should be simultaneously pursued: full employment, growth, price stability, balance of payments, and equitable distribution (Con 1972, p6-7). Elsewhere, the Conservatives proposed emergency wage and price controls to combat inflation (Con 1972, p16). For the NDP, full employment was their first priority, while growth was implicit: "New Democrats put full employment as the primary economic goal. If some price rises occur because of full employment, it is far better and cheaper to compensate victims of inflation – those on fixed incomes – than to squeeze the life out of the economy" (NDP 1972, p2). Thus, the major debates were economic.

The relationship between the economy and the environment also emerged as a common concern. The Conservatives discussed the relationship of urbanization, industrialization, technology, economic and population growth with the environment. Likewise, the Liberals considered the relationship between the economy and environment, emphasizing "Economic growth in a clean environment" (Lib 1972, p6). While declaring the imperative of economic growth, they stated, "Our renewable resources must be conserved and used. Our non-renewable resources must be used wisely. Our industrial resources – primary, secondary, and tertiary - should grow steadily for all the new people coming into the economy" (Lib 1972, p5).

These economic debates and environmental ideas presupposed elements established in the post-WWII era, including national unity, the welfare state programs and industrial and natural resource development. National unity was the Liberals' top concern. Their platform slogan was "Together...the land is strong" (Lib 1972, p1). National unity relied on regional growth. The Liberals emphasized the unity and interdependence of the country, arguing that "progress in each region" benefits all Canadians (Lib 1972, p2) and invited Canadians "to think carefully about their country as a <u>complete unit</u> (Lib 1972, p2 emphasis in original). For the Conservatives a new national industrial development policy was central to achieving growth and jobs, as well as price stability (Con 1972, p7). The Conservatives proposed a New Industrial Development Strategy: "industrial expansion and development that produces jobs" (Con 1972, p9). The Conservatives declared that their "industrial strategy is the primary vehicle for the achievement of the objectives of economic growth and full employment" (Con 1972, p10). Meanwhile, social programs were a major focus of the NDP, including public housing, tax relief

for low-income groups, pensions, unemployment insurance, and healthcare (NDP 1972, p3; p8). Each party emphasized certain features of the previous era.

Economic and energy crises

The July 1974 election was largely about stagflation, the cost of living, and energy. The relationship between economic growth, employment, and inflation continued to be important, with rising costs of living and persistent unemployment. The Liberals focused on inflation and the spiralling cost of living, their platform emphasizing "Food, Housing & Clothing" (Lib 1974, p2). Similarly, the Conservatives declared "The single most important problem facing Canadians today is the escalating cost of living" and emphasized that inflation was the "...central objective of economic policy-making in Canada" (Con 1974, p1). They also declared full employment a top priority (Con 1974, p1). Employment was primary for the NDP, who declared "Jobs for all – the first goal" (NDP 1974, p19). They also placed importance on rising costs of living, including food and all essentials (NDP 1974, p2).

In the aftermath of the 1973 OPEC oil crisis, energy security, independence, and development of Canada's energy resources were top of mind. All parties called for Canadian ownership and control of natural resource industries, promising to control or limit foreign investment. For example, the Conservatives prioritized economic independence and development of resources for Canadians: "The Progressive Conservative Party recognizes the urgent need for increased Canadian participation in our economy. It aims at policies which will ensure the development of Canada by, and for, Canadians" (Con 1974, p1). The Conservatives opposed foreign takeover and foreign investment, promising to regulate foreign investment (Con 1974). They promised Canadian ownership of 50% of non-renewable energy resource industries in Canada (Con 1974, Resources for Canadians paper, p1). Similarly, the NDP declared "To guarantee Canadians enough oil at fair prices" we "must not repeat the mistakes of the past; we must never again jeopardize our interests by turning priceless resources over to corporations that are mostly interested in profits for foreign shareholders. We must not let the tar sands of Alberta and Saskatchewan - perhaps the biggest single resource of oil in the world - be given away" (NDP 1974, p14-15). The NDP noted, "To control our future, we must recover our economic independence. The foreign investment review legislation adopted by Parliament in 1973 is a start" (NDP 1974, p5). They blamed high energy prices on foreign control: "The costs of letting

giant, foreign-owned corporations run our oil industry became painfully evident as prices and profits shot upwards in the face of threatened shortages" (NDP 1974, p14). Meanwhile, the Liberals attempted to resolve national unity tensions among provinces through their energy policies: "Differences between the provinces have to be resolved. We are doing this with the energy problem-resolving differences between producers and consumers so that all Canadians will share in the benefits of our resources" (Lib 1974, p4).

With the rise of energy issues, the debate between economic growth and the environment had declined in importance; the Liberals did not mention the environment, and only the Conservatives still questioned the merits of growth.

While engaging with the problems of the day, parties still referred to elements established in the previous period such as natural resource development, agriculture, industrial development, and export trade. For instance, the Liberal policies relied on production using natural resources and agriculture: "Our policies are directed at using Canada's talents - a well-educated public, a wealth of natural resources, millions of acres of productive land and an economy that consistently performs better than that of any other country" (Lib 1974, p2). They also referred to exporting Canada's natural resources and industrial production (Lib 1974). For the Conservatives, trade was based on industrialization (Con 1974, p2). Only then could Canada compete in the global market: "The thrust of such a strategy should be to equip Canada with a vibrant, diversified industrial base. In this way our country should become a more effective international trade competitor" (Con 1974, p2). To this end they proposed a national industrial policy (Con 1974, p1-2). In these ways, parties continued to presuppose elements from previous periods.

Towards new economic solutions

By 1979, the Conservatives had a new leader, a new direction, and a very different vision. Stagflation remained the top agenda item. Having pointed explicitly to stagflation, the Liberals presented GDP statistics, boasting "continuous growth during a difficult decade" despite "unstable global economic conditions" (Lib 1979, p1). The conservative slogan was "Let's get Canada working again" (Conservative 1979, p1). They focused on both growth and employment: "We have urgent need of measures to stimulate economic growth and create jobs across the country" (Con 1979, p2).

Both major parties emphasized emerging market-based policies and turned to business for solutions. The Liberals promised tax incentives to encourage private investment. They also supported greater reliance on the market system and restraint on government spending. The Conservatives even more clearly adopted free market policies. To create employment, business, not governments were the way to create employment: "We believe that the answer to unemployment lies in the creation of long-term permanent private sector job creation, not in short-term government make-work projects" (Con 1979, p3). They declared, "Give private enterprise a chance" (Con 1979, p58) and explained the central importance of business in their vision, "Increased consumer spending will allow Canadian industry to produce more goods and higher production naturally means more jobs. As industry produces more, business investment will increase, thus creating more jobs" (Con 1979, p58). They supported neoliberal ideas including tax breaks, economic stimulus, minimal government spending, minimal regulation, and reliance on private enterprise to create jobs and growth.

Still, elements from the previous era persisted and continued to be referred to. While parties foregrounded economic issues and emphasized economic growth, their platforms captured elements such as national unity and the welfare state, and their underlying dependence on natural resource development. The Liberals promised to address national unity and threat of Quebec separation (Lib 1979), while the Conservatives promised to restore national unity through "genuine consultation with the provinces" (Con 1979, p3). And the welfare state was a reality: "Eleven cents of every dollar earned by Canadians is spent on social security-everything allowances, medicare, unemployment from old age pensions to family insurance and aid for the working poor. The overall bill amounts to $20 billion each year. The federal government pays old age pensions to more than two million Canadians, family allowances to 3~ million families with over seven million children, and contributes of insured hospital and medical services throughout to the cost the country. These expenditures account for 35 cents of every federal dollar" (Lib 1979, pS-1). The Conservative neoliberal policies were based on natural resource development.

The 1980 election took place in the context of the second oil crisis. Economic issues and energy security were again the dominant issues. The Liberals emphasized the connection between economic and energy issues: "There is nothing as critical for the lifestyle of all Canadians and the stability of the national economy as the concern over energy" (Lib 1980, p1).

Stagflation also remained a central issue, with parties promising different strategies to address it. The Liberals promised to grow the economy through youth employment and industrial development (Lib 1980, p1). Meanwhile, the Conservatives focused on economic stimulus to create growth through tax breaks (Con 1980, p1). A central feature of their platform was their proposal to encourage home ownership through tax breaks (incentives) on mortgage rates to stimulate economic growth and create employment (Con 1980, p1). The Conservatives supported other neoliberal policies such as reducing public spending, tax incentives, and minimal government (Con 1980, p4). They promised to "Get the federal government out of activities in which it doesn't belong" and instead encourage private investment to stimulate growth and reduce the deficit (Con 1980, p4). The NDP promised jobs, a decent standard of living protected against inflation, and a healthy environment, but did not mention economic growth (NDP 1980, p2). They championed economic planning to address social needs of the welfare state such as unemployment, housing, environmental protection, and elimination of regional disparity (NDP 1980, p6).

These solutions continued to rely on elements established in previous eras such as natural resource and industrial development, although there was some recognition that previous development had not been ideal. The Liberals' vision for the 80s promised industrial development through Canadian ownership (Lib 1980). This version of natural resource development embedded elements of the domination of nature reminiscent of the National Integrity era: "Most of the resources in this vast expanse of land have not yet been tapped. New technology is bringing us closer to developing resources which are potentially abundant" (Lib 1980, p2). This vision of development was contested by the NDP: "The NDP would like to see an industrial strategy that would emphasize small business and de-emphasize the kind of "rip-and-run" resource exploitation that has plagued our economy for so long" (NDP 1980 Small Businesses, p16).

In sum, 1970-1982 was a time of rapid change. The post-WWII era had ended and political debates of the 1970s were dominated by national unity, the economy, and energy security. These discussions evolved rapidly with the troubles of the times. The environment, protectionism, energy security and independence, and neoliberal policies emerged, some in passing and others to stay.

6. Neoliberal globalization (1982 – 2008)

In the early 1980s, the post-World War II Keynesian order gave way to neoliberalism and globalization (Ruggie 1982). Neoliberal thinking gained dominance in the early 1980s when Ronald Regan and Margaret Thatcher implemented free market reforms in the US and UK (Ritzer 2011). Neoliberalism is often equated with the set of political-economic policies articulated in the Washington Consensus and applied by US-based Bretton Woods institutions in the 1990s (Babb 2013). Core state reforms articulated in the Washington Consensus include discipline of government spending, prioritizing supply-side investments over redistribution, decreased taxes, market-determined interest rates and capital flows, competitive exchange rates to induce growth, free trade, removing barriers to foreign direct investment, privatization of public assets, deregulation and ensuring property rights (Peck 2001).

In Canada this period was characterized by a new economic direction, a shifting political landscape, and threats to national unity. The British North America Act of 1867 was replaced by the Constitution Act of 1982 and the Charter of Rights and Freedoms (Riendeau 2007). That same year, the MacDonald Commission was formed and would set the tone for economic globalization. Gone were the protectionist policies of the 1970s, replaced by increasing economic openness. For Canada, this meant a shift from protective tariffs to free trade, the rollback of the welfare state, smaller government, and lower taxes. During this period, several new parties also emerged. The Green party was created in 1983, the Reform Party of Canada in 1987, and the Bloc Quebecois in 1991. National unity was also an important national discussion. The two Quebec referendums of 1980 and 1995 were separated by two attempts at appeasement – several provinces failed to sign the 1987 Meech Lake Accord, while the Charlottetown Accord failed in a public referendum in 1992. Tensions escalated when the Bloc Quebecois became the official opposition in 1993. That same year, the Reform party gained prominence with the collapse of the Conservative party. The Reform party became the Canadian Alliance in 2000. Then in 2003, the Canadian Alliance and Progressive Conservative parties merged to form the Conservative Party of Canada.

The dominant belief system in Canadian federal politics

Within this context, the dominant belief system was characterized by ideological debates about neoliberalism and free trade, with general agreement on the knowledge-based economy

(Figure 4). On the surface, political debates focused on neoliberal policies, national unity, and increasingly the relationship between the economy and the environment. In 1984, economic issues dominated, including growth, taxes, and the deficit. Brian Mulroney's Conservative party won a landslide victory. The 1988 election was primarily about Mulroney's proposed free trade deal with the USA, the Canada-US Free Trade Agreement (CUSFTA). The Liberals cried "No to the Mulroney trade deal" (1988, p2). They claimed CUSFTA threatened Canadian sovereignty: "The Mulroney trade agreement sells out Canada's sovereign control over its own economic, social, cultural and regional policies. It turns Canada into a colony of the United States" (Lib 1988, p2). For the NDP, CUSFTA was a threat to Canadian livelihoods and approaches established in the Trudeau era such as regional development and economic planning were threatened by CUSFTA: "Careful economic management of natural resources according to regional needs and priorities would create jobs. Instead Brian Mulroney has signed away our control over regional development to get a trade deal with Ronald Reagan" (NDP 1988, p2). The NDP appealed to protectionism and tariffs of the previous era: "The lifting of tariff protection for our small businesses also removes the need for US companies to even invest in Canada" (NDP 1988, p9).

In 1993 free trade was again the most debated topic, sharing the spotlight with Mulroney's controversial goods and services tax (GST). Mulroney and the Conservatives championed the North American Free Trade Agreement (NAFTA), claiming it would deliver jobs (Con 1993). The Liberals and NDP both opposed NAFTA and the GST. Although they opposed NAFTA, the Liberals did not oppose free trade: "Canada is a trading nation. Our jobs and future prosperity depend on our ability to sell our products abroad. A Liberal government will go beyond trade dependence on the United States to pursue a more open and liberalized GATT..." (Lib 1993, p25).

Another heated debate was about the neoliberal project to dismantle the welfare state. The Liberals talked about how many welfare state laws and policies "remain the basis of our system of social support, through which we pool our resources to create programs that benefit all Canadians and help to sustain people through difficult times" (Lib 1993, p73). In contrast, the Conservatives championed the neoliberal agenda: "Changes we're introducing to cut needless regulation, to simplify the administration of the GST and other programs will allow us to cut out waste and inefficiency, to spend smarter and provide better service to all Canadians. At the

centre of these initiatives remains our fundamental commitment - to hold the line on taxes and on spending and eliminate the federal deficit within five years" (Con 1993, p4). Thus, ideas such as NAFTA and welfare state programs remained the ideological battleground of the neoliberal period.

While specific elements of neoliberal globalization such as free trade, taxes and the role of the state were contested, events of the time had a major influence on party platforms and there were many issues that they largely agreed upon. With the 1992-3 recession and threat that Canada's credit rating would be downgraded, eliminating the deficit became a major priority of all parties in 1993. The Liberals were strongly in favour of eliminating the deficit. Meanwhile, the Conservatives declared "The lack of job opportunities and our national deficit are the two biggest challenges facing Canadians today" (Con 1993, p8). And the NDP promised to "Pay down the deficit by getting Canadians working" (NDP 1993, p5). At the same time, the elevation of the separatist Bloc Quebecois to the status of official opposition in the House of Commons in 1993 and the Quebec referendum of 1995 brought national unity to the forefront of political discourse. As a result, the 1997 election focused on national unity, economic issues, and welfare state programs. All parties focused on national unity. Economically, the Liberals and Conservatives emphasized jobs, growth and the deficit, while the NDP focused on community livelihoods and jobs.

There was also much agreement on the vision of a knowledge-based economy. Its central idea was the aspiration that the source of Canada's economic growth and prosperity would shift towards ideas, not material resources. The Liberals emphasized "The human mind is the engine of growth in the new economy" (Lib 2000, p10), while the Conservatives declared "Today, more than ever, knowledge drives growth in the economy, in jobs and in our standard of living and advancements in the quality of life..." (Con 2000, p4). A knowledge-based economy would be realized through a plethora of pathways including innovation, investment, entrepreneurship, small business, education, research, science and technology (Lib 2004, p42). For example, the Liberals claimed, "Canada will be a smart country. Under a Liberal government, Canada will expand its considerable knowledge, innovation, and research capacity, and accelerate its leadership in the new economy" (Lib 2000, p3). The vision of a knowledge-based economy held political consensus.

This consensus view fit within the dominant view of the world as increasingly globalized, interconnected and rapidly changing through communication and technology. For the Conservatives, Canada was in a global race: "Today, technologies are changing rapidly and product cycles are shortening dramatically in all sectors. Canada cannot succeed by selling tomorrow's products with yesterday's ideas. Those who are the first to develop new products win" (Con 2000, p7). The NDP position also reflected this view of global competition: "We must reinvigorate the federal government's role in making Canada competitive in the new economy of technology and globalization" (NDP 2000, p8). Meanwhile, the Liberals envisioned that in the new knowledge-based economy "Canada will become a magnet for talented people and new investors" (Lib 2000, p3). In these ways, the knowledge-based economy was an extension of neoliberal globalization.

Although the rise of neoliberalism and the knowledge-based economy entailed the rejection of post-WWII Keynesian welfare state economics, it presupposed much of the pre-existing system. This included the imperative of growth, the imperative of government to deliver jobs, consumerism, industrialization, urbanization and Canada's natural resource-based economy. There was clear recognition from the beginning that this consensus rested on previous foundations. For instance, Conservative leader Brian Mulroney explicitly recognized that the knowledge-based economy was an addition to and layered upon the pre-existing system of industrialization, manufacturing, and natural resource development:

> I think much of this trendy talk is missing the point. [...] The essence of the so-called information revolution is not the production of technology, but the use of these new technologies in old industries production, -- in farming and fishing, car-making and steel textiles, mining and the forest industries. [...] That's why I say we are witnessing an information evolution as farmers, fishermen and other businessmen apply new ideas and technologies in their existing enterprises (Con 1984, p1).

After the upset of the 1970s, the leading parties had returned to promising jobs and growth as a core objective. In 1993 the Conservatives prioritized three things in order: jobs and growth, quality of life, and making government work (Con 1993). Meanwhile, the Liberals had developed a comprehensive plan for the 1993 election called The Red Book and the first section proposed policies for jobs and growth. This plan was built on five elements: small and medium-

sized businesses, the manufacturing sector, natural resources, community and regional development, and building Canada's infrastructure (Lib 1993).

Many features that were contested or explicitly discussed in past periods were treated as the common sense "way things are" (Figure 4). Urbanization, consumerism, Canada's trade- and export-dependent economy, natural resource development, private property, sovereignty, domination of nature, and national infrastructure that embedded these features remained largely presupposed, often only recognized in reference to other ends. For instance, the Conservatives appealed to Canada's identity, declaring, "Canada is a trading nation" (Con 2000, p7), while the NDP recognized "Canada's wealth is built on its natural resources" (NDP 1988, p3).

In many ways this layering was explicitly recognized. Parties did not refer to all features of the dominant belief system, but collectively captured its main historical features. The NDP reflected, "Canadians built a railroad in the 19th century and public health care and public pensions in the 20th century. Together, we can embark on the great project of building the country we want for the 21st century" (NDP 2004, p3). Similarly, the Conservatives reminisced:

> We have tested our mettle in world wars fought to defend freedom. We have worked to unite and keep united a country with two official language communities, vast geographic distances, and many cultures. We have exported our products and ideas around the world and built a trading nation that is second to none in the world (Con 2006, p42).

Likewise, the Liberals treated Canada's colonial history, with the immigration and settlement of the land, as well as the welfare state of the post-WWII period as given and immutable contributions to the forward progress of the country:

> Canada is a great country today thanks to the vision and effort of generations of Canadians. From the Aboriginal Peoples who were the original inhabitants of this land to the pioneers who set off from the Old World to build a better life in the New World, to the men and women who formed a federation from coast to coast to coast, fought for universal health care and the Charter of Rights and Freedoms. We stand on the shoulders of those Canadians who came before, who worked to leave a better Canada to their children and grandchildren (Lib 2008, p3).

In sum, the period of neoliberal globalization established a new layer that assumed and presupposed many of the elements established in previous periods. Neoliberalism included free

trade, open markets, a minimal state, elimination of deficits and low taxes. It also included a knowledge-based economy that focused on ideas, innovation, technology, investment and small business.

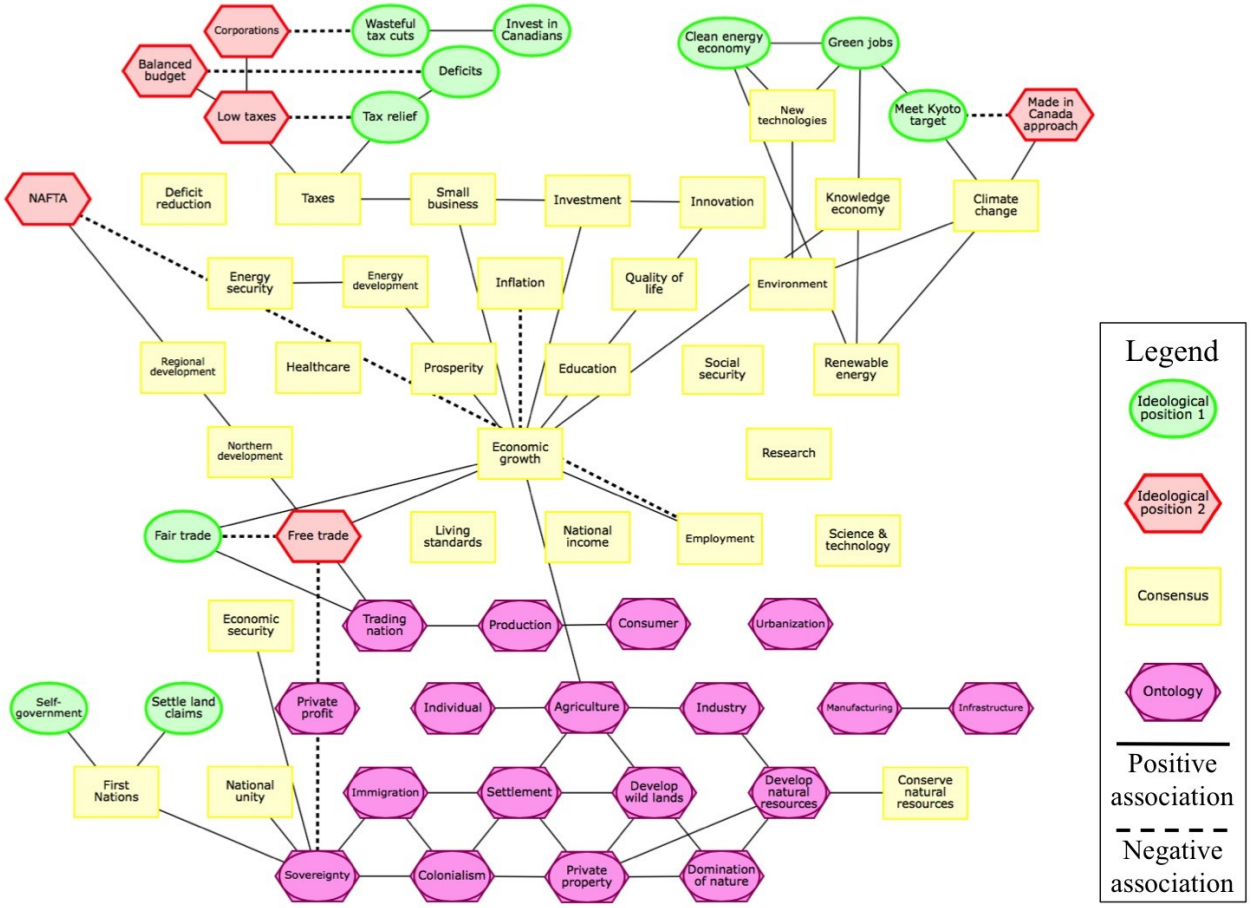

Figure 3.4. The dominant belief system in 2006 during the period of Neoliberal Globalization
Ideological debates (red vs. green) are about free trade, a minimal neoliberal vs. larger welfare state, and emerging polarization on the economy and environment. Elements of the knowledge-based economy (top yellow layer) all presuppose growth and jobs (center yellow), and the rest of the dominant system (lower yellow and purple).

7. The deep fissures of current political economy (2008 – 2017)

This period began with the onset of the 2008-2009 global financial crisis. The economy, the environment, and their relationship rose to national prominence. In 2008 former environment minister turned Liberal leader Stéphane Dion ran on a platform with climate change as its central theme. The economically-minded and Western-oriented Conservative party would win a

minority with Stephen Harper's attack on the Liberal carbon tax. In 2011, Harper won a majority at the expense of the Liberals, while the NDP gained second party status. Meanwhile, the global financial crisis affected all sectors of Canada's economy, with lasting repercussions. Several economic crises followed, including the 2010-2012 auto restructuring and layoffs in the oil sands in 2014-2016. Justin Trudeau's Liberals won in 2015 and signed the Paris Agreement on climate change. However, rising populism, demands for oil pipelines, and resistance to carbon pricing reveal underlying tensions.

The dominant belief system in Canadian federal politics

In 2008, global economic instability and looming economic recession (low economic growth) were the overwhelming concerns. The two major parties framed the situation as a crisis, but in very different ways. The Conservatives framed the problem as one of global economic insecurity: "In a time of global economic uncertainty, Canada needs a strong and steady leader at the helm" (Con 2008, p2). The Conservatives argued, "Stephen Harper and the Conservative Government have helped Canadians cope with these challenging times" (Con 2008, p4), claiming their actions "helped boost economic growth during the current slowdown" (ibid, p4). For the Conservatives, 2008 was an economic crisis about faltering growth. The Liberals also framed the situation as a crisis, but a crisis of climate change demanding a transformation of the economy: "we face challenges that our parents never imagined, from climate change to globalization" (Lib 2008, p3). The Liberals presented climate change as an urgent global crisis: "The world today faces an unprecedented global crisis: climate change" (Lib 2008, p24). They cited scientists' warnings that climate change "will lead to a catastrophic disruption of life as we know it" and declared, "we must act urgently to stop it. Humans caused global warming and humans can fix it – we have the know-how and we have the technology, but we need the leadership to mobilize our entire society towards this great task" (Lib 2008, p24). This task demanded response from all of society, requiring a revolutionary transformation of the economy: "The last time Canada faced a challenge of this proportion was at the outbreak of the Second World War: At that time, all elements of society – government, industry, labour and ordinary citizens – responded to the challenge of a country-wide mobilization against a global threat. We can do this again" (Lib 2008, p24). The NDP rejected the crisis framing of the Conservatives and

Liberals, and the idea that low GDP growth was an indicator of crisis. Instead, they focused on long-term change (NDP 2008, p4).

In 2011 the Conservatives moved from a minority to a majority, while the NDP won a landslide in Quebec to become the official opposition at the expense of the Liberals, who fell to their lowest number of seats in history. The Green Party elected their first member of parliament. In contrast to 2008, in 2011 the economy was the dominant issue for all major parties, while the environment and economy-environment relationship were marginal. By the 2011 election the Canadian and global situation had not fully subsided, and the Conservatives framed the election as a time of instability and insecurity. They declared, "we're steering our country through the worst global economic recession since the 1930s" (Con 2011, p2) and framed the election as a choice between stability, growth and jobs versus risk. Emphasizing political differences, they warned,

> In this election, Canadians will choose between principled leadership and opportunism; between a stable government and a reckless coalition; between a low-tax plan for jobs and growth and a high-tax agenda that will stall our recovery, kill jobs, and set you and your family back. It's a clear choice, a real choice – and it couldn't be more important (Con 2011, p2).

The Liberals also spoke of the recession and the economy, but talked more about families, social services and values such as equality and opportunity. Most significantly, the Liberals opposed tax cuts for corporations as unfair while the Conservatives promoted them as good for growth. The NDP plan was solutions-oriented and did not articulate their underlying philosophy or goals.

In 2015 Stephen Harper's Conservatives again tried to frame the situation as unstable and insecure: "Amid a global economy that is once again weak and in turmoil, Canada's economy remains stronger than most – but it's fragile, and needs protection from instability elsewhere in the world" (Con 2015, p3). In contrast, the Liberals brought a message of hope and change, while the NDP emphasized values and "building a country of our dreams."

Consensus and ontology

Despite these differences in ideology and framing, party positions had much in common. The major parties presented an economic doctrine that was almost uniform in its core features, including the imperative to deliver jobs and growth. The Conservatives warned that economic

growth and Canadian jobs were at risk. The Liberals also promised, "We will kick-start investment in innovation to grow our economy and create good, middle class jobs" (Lib 2015, p15) while, "kick-starting the economy and creating good jobs" (NDP 2015, pii) was a top priority for the NDP. Even in the Liberals' 2008 call to address climate change, such actions came second to ensuring economic growth. The Liberals presented three problems in order of importance: "growing our economy, fighting the climate change crisis, and helping our fellow Canadians" (Lib 2008, p4). The Liberals first prioritized economic growth, then climate change:

> The first challenge is ensuring Canada's wealth and prosperity in a time of economic downturn around the world. Our first priority, as individuals and as parents, is being able to pay our bills at the end of the month, to live the life we all want, and to prepare the future of our children. That's why the first priority of a Liberal government will be to enhance our quality of life. In a fiercely competitive global economy, Canadians deserve a government that puts their financial security first (Lib 2008, p4).

Only after economic growth did the Liberals prioritize climate change, simply declaring, "The second challenge comes from the first. [...] we know beyond any serious doubt that our planet cannot handle the pressure we're putting on it" (Lib 2008, p4).

Throughout this period, platforms included distinct sections that reflect the increasing complexity of Canadian federal politics and its previous periods. Major sections of party platforms had become consistent and almost uniform across parties (Table T in Appendix). These sections include the economy (economic growth, jobs, tax cuts); social services (education, childcare, pensions); healthcare; Canada's material economy (infrastructure, resource development, manufacturing, export, trade, investment, innovation); national unity; international relations; safety and security; and the environment. These features reflect an increasingly complex system that has developed through a distinct history over the last 150 years (Figure 5).

Many features of this system continue to be treated as the way things are. As voiced by the Liberals, much of Canada's historically determined features remain, including its colonial past, settlement, immigration, post-WWII welfare state programs, and much more:

> Canada is a great country today thanks to the vision and effort of generations of Canadians. From the Aboriginal Peoples who were the original inhabitants of this land to the pioneers who set off from the Old World to build a better life in the New World, to the men and women who formed a federation from coast to coast to coast, fought for

> universal health care and the Charter of Rights and Freedoms. We stand on the shoulders of those Canadians who came before, who worked to leave a better Canada to their children and grandchildren (Lib 2008, p3).

These views were mirrored by other major parties, emphasizing that this evolving system carries with it features from Canada's colonial history of settlement and immigration to the globalized and interconnected 21st century:

> From the days of the French and British traders who first laid the foundations of our modern economy, Canada has been a trading nation. Trade is the lifeblood of our economy. It accounts for 60 percent of our GDP, and one in five Canadian jobs. Canadian businesses and workers know instinctively that we can compete with the world's best as long as the playing field is level. We also know that we're better off when our goods and services can reach global markets without barriers and restrictions (Con 2015, p21).

Discussion and conclusion

This chapter presented the dominant belief system as a complex system of concepts in relation to its social, ecological, and historical context. Mapping the dominant belief system in Canadian federal politics 1867-2017 yields three important observations. First, this method captures the macroeconomic policy paradigms and paradigm shifts typically observed in studies of Canadian political economy. These macroeconomic paradigms are National Integrity (1867-1878), the National Policy (1878-1929), Post-WWII Reconstruction and Development (1945-1970), and Neoliberal Globalization (1982-2008) (Table 3.2).

These periods align with policy paradigms identified in other studies of Canadian political economy. For instance, Jenson (1990) characterizes accumulation regimes in Canada as: nation-building dependent upon primary production and industry through the National Policy (1800s-1930); the development of post-WWII Fordism particular to Canada (1930-1945); Fordism (1945-1970); and post-Fordism (1970-2008). Internationally, regulation theorists have identified similar accumulation regimes in Western countries: extensive accumulation (1800-1850), intensive accumulation of industrialization (1850-1945), consumer society of Fordism (1945-1970), and post-Fordism of neoliberal capitalism (Zuindeau 2007). At each shift, the web of ideas that represents a paradigm is rejected and replaced with a new one.

Second, in contrast to other studies this method also identified and characterized periods of instability – those interregnums between paradigms (Table 3.2). This method emphasized not only long stable periods and that ideas change at critical points in history, but also brought attention to shorter periods of relative instability. These periods were from the Great Depression until WWII 1929-1945, the period of instability following the post-WWII boom 1970-1982, and the current period since the 2008-2009 financial crisis from 2008-present.

During these periods of instability, the typical pattern whereby contested new ideas are layered upon persistent and established ones was not observed as clearly. Instead, these periods were characterized by ongoing crises and shifting problem foci that most or all parties viewed as important. In the first two instances, the situation escalated over time. From 1929-1945 the dominant focus escalated from unemployment to unemployment and inequality, and then shifted to WWII conscription. During the 1935 election, polarized ideological debates emerged between capitalism, socialism, and communism; between free enterprise and social planning; and between private profit and greed. Likewise, from 1970-1982 the dominant focus evolved from economic recession and inflation to the first OPEC energy crisis. Then, to persistent economic problems was added a second energy crisis. Importantly, the dynamics that dominate in these periods of instability may be different from stable periods. The third instance may still be ongoing, and it remains too early to define without the perspective of hindsight.

Table 3.2. Periods of relative stability and instability in Canadian federal politics

Year	Period	Type
1867 – 1878	National Integrity	Stability
1878 – 1929	National Policy	Stability
1929 – 1945	Great Depression – WWII	Instability
1945 – 1970	Post-WWII Reconstruction & Development	Stability
1970 – 1982	Economic, energy and national unity crises	Instability
1982 – 2008	Neoliberal Globalization	Stability
2008 – 2017	Climate and economic crises, global insecurity	Instability

Third, this analysis also revealed that many elements were able to persist despite these paradigms and paradigm shifts (Figure 3.5). In the transition from the National Integrity era, to

the National Policy era, elements such as settlement, immigration, and the development of land and natural resources were retained and persist today. Likewise, in the transition from the National Policy to the Post-WWII Reconstruction and Development period, elements such as manufacturing, industrialization, urbanization, and an export-based economy were retained despite significant changes during the period of instability from the Great Depression until WWII. In turn, many elements established during the post-WWII reconstruction and development period and before persisted into the period of Neoliberal Globalization, despite the period of instability of 1970-1982. These elements include capitalism, consumerism, the imperative of economic growth and jobs, national unity tensions, and welfare state programs such as education, healthcare and pensions. Finally, if the current period is an unstable period, it remains to be seen which elements will persist over the long term and which will be discarded. Elements that characterize the period of neoliberal globalization and appeared persistent as of January 2020 were a minimal state, free trade, low deficits, the knowledge-based economy, and sustainable development. With the 2020 global pandemic, some of these elements are now in question. Even still, much of what was previously established is likely to remain.

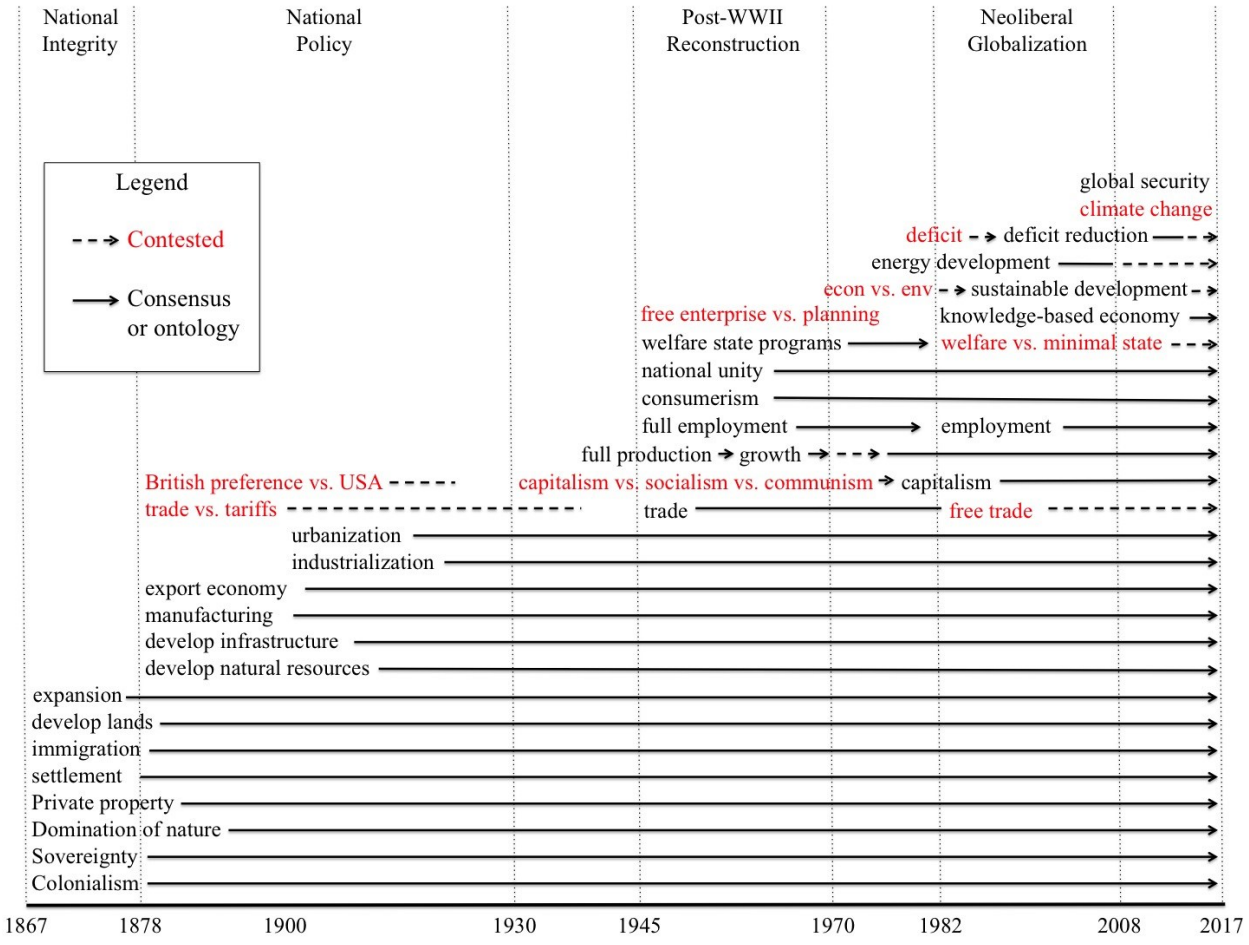

Figure 3.5. The evolution of the dominant belief system in Canadian federal politics 1867-2017 Macroeconomic paradigms (National Integrity, National Policy, Post-WWII Reconstruction and Development, and Neoliberal Globalization) are progressively layered upon one another, despite shifts in the ideological debates (red) between each period. Elements accumulate over time to produce an increasingly complex system. Solid black arrows indicate consensus or presupposed ontology, whereas dashed lines indicate continued contestation.

The result of these dynamics is the accumulation of elements and the layering of new elements upon established ones over time, leading to the increasing complexity of the system. Indeed, party platforms provide strong evidence of this accumulation over time. Since 1987, the length of party platforms has increased by two orders of magnitude, from platforms of a few pages to platforms over 100 pages (Figure 3.6). Although much research identifies and discusses the macroeconomic paradigms and ideological debates of these periods, almost no attention is paid to the vast majority of elements accumulated over time. Rather, these elements are either ignored, or taken for granted as the way things are.

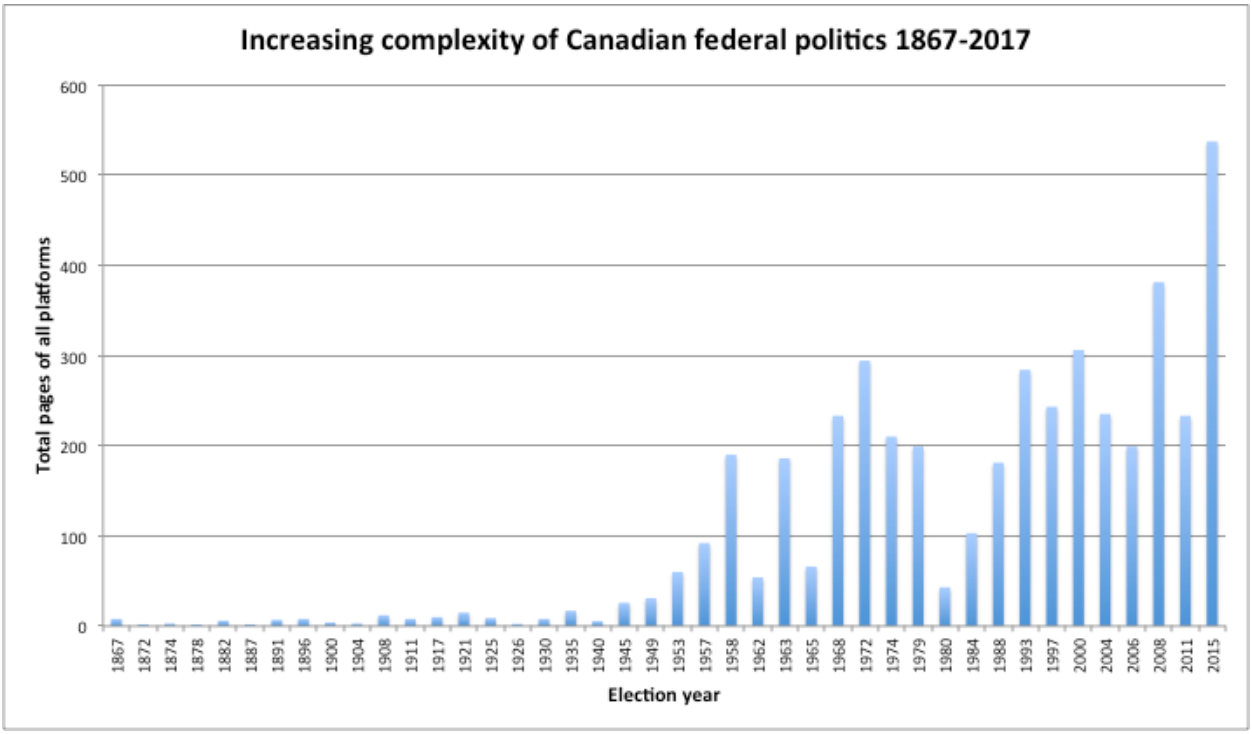

Figure 3.6. The increasing complexity of Canadian federal politics 1867-2017
(Illustrated by the total number of pages of election platforms for each year 1867-2017).

Together, these dynamics produce a picture of an evolving system characterized by macroeconomic paradigms separated by interregnums traditionally called paradigm shifts. However, not all elements are rejected and discarded during these interregnums, such that elements accumulate and amount to an increasingly complex system. As a result, elements that are ideologically contested in one period may be discarded in the next period, whereas other ideological elements may become consensus or common sense. Economic growth is one of those elements that has been retained and persists despite interregnums of instability. Why are some elements rejected or changed during periods of instability, while others are retained and persist? What leads to the rejection of some elements, but retention of others? According to what logic does this selection process occur?

Chapter 4: The story of economic growth and the environment in Canada 1867-2017

In the context of the dominant belief system, this chapter tells the story of economic growth and the environment in Canadian federal politics. Chapter 3 mapped the dominant belief system in Canadian federal politics 1867-2017 and demonstrated how elements such as economic growth can be understood in relation to that evolving system, even as that system evolves within its social, ecological and historical context. A key insight was that, over the long term, some elements were discarded during the paradigm shifts, whereas other elements were retained.

Economic growth is a critical test case to understand the economy-environment relationship within this larger framework. The story of growth warrants careful attention because it is the first instance in which the economy and the environment were explicitly considered in relation to one another, and reflects the ongoing tensions between these two concerns. Following the approach used in Chapter 3, I present the story of economic growth in Canadian federal politics using political manifestos (party platforms) 1867 – 2017. Given that ideas about economic growth and the environment evolved within the envelope of the dominant belief system, I show how economic and environmental ideas encountered one another during the critical period of the 1970s, and how these ideas evolved throughout the 1970s and since. The story of economic growth and the environment in Canada presents a paradox that existing explanations fail to address. Explaining this paradox holds potential that the relationship between the economy and the environment can be resolved in a way that allows for not only a vibrant human society, but also for nature to flourish.

Before growth (1867-1929)

The National Integrity era (1867-1878)

During the National Integrity period 1867-1878, neither economic growth nor the economy-environment relationship were mentioned or even considered as part of the dominant belief system. Instead of growth, emphasis was placed on expanding the nation. For instance, in 1867 the Liberal-Conservative Union argued that including provinces such as Newfoundland and

PEI "is essential to the prosperity of the new Dominion (Con 1867, p2). The environment was not mentioned.

The National Policy era (1878-1929)

During the National Policy era from 1878-1929, geographic expansion of the nation was again pursued, but the term economic growth was rarely used and was not thought of in the way it is today. Early on, growth was not considered significant:

> we inaugurated the National Policy. You all know what followed. Almost as if by magic, the whole face of the country underwent change. Stagnation and apathy and gloom – ay, and want and misery too – gave place to activity and enterprise and prosperity (Con 1891, p30).

In a rare mention, the Liberals, argued that prosperity depends on export of natural resources and stated "the growth of our manufacturing and commercial interests and the prosperity of all classes in the Dominion" (Lib 1911, p62) depend on access to markets for Canadian industries. The export-based tariff focus of the National Policy persisted and growth had not become prevalent. For example, the Conservative party argued that tariff policy "is the very root of [Canada's] prosperity" and contrasted this to the "progressive absorption of Canadian industries...in the ever-expanding system of the United States" (Con 1921, p90).

Conservation thinking also emerged during the National Policy era. Environmental issues were first framed by the Conservatives in 1917 as the development and conservation of resources. They referred to the "general development of all the varied resources of Canada, and the conservation and distribution to the best advantage of the people" (Con 1917, p75). In 1921, they discussed "conservation and natural resources", promising to adopt policies "as will result in their use and development to the advantage of Canada as a whole" (Con 1921, p87) and in 1925 they promised "to conserve for Canadian development our essential and irreplacable resources in material and power" (Con 1925, p95). These ideas were solely mentioned by the Conservatives, and always with the utilitarian aim to develop and conserve natural resources for human use. This early utilitarian view of conservation contrasts with more recent interpretations that are less human-centric.

Precursors to growth in troubled times (1929-1945)

During the period from the Great Depression until the end of WWII, economic growth was not mentioned and other objectives took precedence. In 1930, National Policy ideas about the export of excess production to foreign markets still predominated. The Liberals promoted "greater freedom in the matter of trade, in a manner that will encourage production at home and the marketing of our excess production abroad" (Lib 1930, p112). Meanwhile, the Conservatives declared, "We pledge ourselves to the stabilization of economic conditions, and to continuity of trade and freedom from the manipulation of home and foreign tariffs" (Con 1930, p110). Ultimately, the focus was on stabilizing economic conditions rather than growth.

In 1935, standards of living were an important objective, but so were issues such as inequality. The Conservatives included a section entitled "Ways of safeguarding standard of living" (Con 1935, p118). They were concerned about the economy, promising to save "Canada from insolvency and return her to prosperity and happiness" (Con 1935, p119). The CCF also focused on the economic crisis, poverty, unemployment, and insecurity (CCF 1935, p119). However, more emphasis was placed on the distribution of national wealth and income than on growth. The Conservatives declared, "Economic equality, in the reasonable meaning of the word, we are speedily attaining. It is our job to speed it up. Those who still have wealth, if they are wise would be the first to proclaim the soundness of this view. Because, my friends, sanity and fair play, are the means we choose to secure them" (Con 1935, p119). The Conservatives argued, "We must all subscribe to the controlling fact that henceforth great poverty and great riches cannot live side by side in the same community" (Con 1935, p119). Likewise, under a section entitled "More equitable distribution of wealth" the Liberals explicitly declared the primacy of distribution over production: "The Liberal party recognizes that the problem of distribution has become more important than that of production, and believes that personality is more sacred than property. It will devote itself to finding ways and means of effecting a fair and just distribution of wealth with increasing regard to *human needs*, to the furtherance of *social justice*, and to the promotion of *the common good*" (Lib 1935, p130, emphasis in original).

In 1940, the war brought a focus on material production, but discussion of living standards, wealth, and national income disappeared. The Conservatives called for "A full mobilization of Canada's material resources, with War materials produced and purchased in Canada as far as possible" (Con 1940, p139). Neither the Liberals nor the Conservatives

mentioned production, living standards, or national welfare, while the CCF simply advocated economic planning as important to raise standards of living (CCF 1940, p139).

In sum, in the 1929-1945 era, neither economic growth nor the environment was mentioned. Precursors to growth, such as national income, living standards, and production emerged and were discussed. However, objectives such as employment, equality and distribution were prioritized over production.

From growing optimism to uneasy affluence (1945-1970)

Economic growth

Precursors to growth had emerged by 1945, including a focus on national income, an expanding economy, and simply an emphasis on more. The Conservative goal was "maintaining a high level of production and of national income" (Con 1945, p162). They talked about "expansion of internal economy", emphasizing the need for more food, clothing, housing, schools, medical and dental care, hospitals and hospital beds, automobiles, home conveniences, transportation, vacations, tourist trade, scientific research, venture capital, and purchasing power (Con 1945, p162). Yet explicit focus on growth remained absent. Instead, the goals of stimulating production and living standards were the means to other ends such as jobs and fair distribution. The Labor-Progressive party most explicitly declared this: "jobs for all in an expanding economy" (Lab-Prog 1945, p152). For the CCF, social security and living standards were secondary to the distribution of wealth: "No system of social security can last, and no rising standard of living is possible, unless we make full use of our resources to produce the goods and services which our people need, and to distribute this wealth fairly" (CCF 1945, p143). The Liberals did not mention growth, production, national income, or wealth; instead, they talked primarily about creating jobs (Lib 1945, p157).

In 1949, the idea of prosperity as full production emerged, based on expansion of national production and income. Again, expansion was couched in terms of more, but this time by the Liberals: "A free economy distributes plenty rather than rations scarcity, - it provides more and more people a larger share of more and more" (Lib 1949, p186). This focus on more demanded government intervention, as voiced by multiple parties. The Conservatives promised a "bold and progressive national development programme" (Con 1949, p188), arguing that Canada's

"greatest period of development" required a "vigorous government" to "bring into production the immense resources" of Canada (Con 1949, p188). Similarly, the CCF believed that many methods should be used "to achieve the fullest possible production" (CCF 1949, p171). Thus, all parties supported full production.

Despite emerging ideological divisions of the cold war, parties continued to support these precursors to growth. In 1953, the Conservatives, in favour of a free enterprise system, declared "maintenance of full employment with the highest possible standard of living our primary objective" (Con 1953, p231). In contrast to free enterprise, the CCF declared "planning for maximum production" their objective (CCF 1953, p198). Within this objective, they promised fair distribution of national income. Meanwhile the Labor-Progressive Party promised to "steadily increase the output of Canada's industries and agriculture, to lighten the burden of labor, to constantly improve the economic and cultural conditions of the people" (LPP 1953, p207). Thus, although parties' specific objectives varied, they all pursued maximum production.

In 1957, the Liberal party pioneered the strategy of claiming credit for and promising economic growth, even while Diefenbaker's Conservatives won a string of elections. The Liberals declared, "From coast to coast the Canadian story is ACTION and GROWTH" (Lib 1957, p2 emphasis in original). They emphasized Canada's "AMAZING INDUSTRIAL EXPANSION" and lauded the benefits of that expansion (Lib 1957, p2 emphasis in original). They claimed credit for growth, which was "testimony to the favorable climate for expansion created by Liberal action policies, boldly administered" (Lib 1957, p2). They asserted, "Liberal policies and Liberal leadership have created an economic climate which has encouraged and supported Canada's growth" (Lib 1957, p2). Building upon this growth, they promised social programs including increased healthcare, social security, unemployment, pensions, and welfare. In 1958, they again promised "a vigorous economy" and declared the "Liberal party's aim is an expanding Canadian economy with full employment and rising standards of living for all" (Lib 1958, p245).

At first, other parties contested the Liberal strategy of promising growth. In 1957, they challenged growth as an inadequate measure of prosperity and an undesirable objective. The Conservatives argued that the Liberals undeservedly "will take credit for the National Income", despite "shipment of our exhaustible resources in raw material form to a large degree to the United States", and use statistics to mislead farmers about lost markets (Con 1957, p227).

Meanwhile, the CCF challenged the assumption that growth alone would deliver what the Liberals promised, arguing "[d]espite our country's great economic resources, many basic needs of our people have not been adequately provided for" (CCF 1958, p238). They critiqued growth, linked to private profit and capitalism, as immoral. They declared, "Economic expansion accompanied by widespread suffering and injustice is not desirable social progress" (CCF 1957, p216). For the CCF, "A society motivated by the drive for private gain and special privilege is basically immoral" (CCF 1957, p216). Hence, they proposed "Private profit and corporate power must be subordinated to social planning designed to achieve equality of opportunity and the highest possible living standards for all Canadians" (CCF 1957, p215). Thus, initially, the Liberal strategy of claiming credit for and pursuing growth as a primary objective was critiqued on both rational and moral grounds, and largely opposed.

In 1962, Canada experienced a recession, with drops in employment and economic growth. The Conservatives ran on their record, while the Liberals and NDP established clear positions. The Liberals continued to promise economic growth and to assert the state's role in ensuring this objective. The first aim of Liberal policies was "to create and maintain vigorous economic growth. Economic growth is the foundation on which we can enjoy increasing incomes, expanding opportunities for a better life, social and national progress" (Lib 1962, p263). The Liberals' second aim was to "make economic growth work for all Canadians, fully and fairly" (Lib 1962, p263). The NDP also viewed the economy and pursuit of economic growth as responsibilities of the government. The NDP stated that it would "accept the challenge of being the architect of Canada's economic future. It will plan for continuous growth, for a dynamic, expanding economy" (NDP 1962, p279). Even still, for the NDP growth remained a means to other social objectives. The NDP emphasized, "Yet growth is not enough; it must have a social purpose. The New Democratic government will harness this growth" (NDP 1962, p271) for full employment, to better allocate resources, and to fairly distribute wealth. Economic growth under free market capitalism was insufficient; instead, social planning was required (NDP 1962, p270-271). While the Liberals had first promoted growth as a central objective, after the recession of 1962-1963 all parties supported growth.

In 1963, the Liberals regained power in the aftermath of the recession, and the primary objective and role of the government for all parties was to ensure continued economic growth. For the Liberals, the economy was the central problem of government, requiring management for

growth. They referred to the "economic slow-down" and promised "sound and steady management of the nation's business" (Lib 1963, p295). Growth was a panacea: "We need new policies for the problems of new times that will encourage new industry, create more jobs and more production. This economic expansion will mean bigger incomes for us all. The country's affairs will be brought into order" (Lib 1963, p295). The Conservatives also promised to "Continue economic growth"; they connected growth with new jobs and claimed taxes were "retarding growth" (Con 1963, p303).

In 1965, growth was increasingly seen as an end in itself, a primary objective flowing from and connected with goals such as natural resource development, employment, and education. The Liberals declared,

> Canada's basic wealth comes from her resources. We live in an era of expanding trade and there is a growing market for most of our production. A strategy for development, management and conservation of our resources is therefore essential to full growth of our economy. It is indeed, a great national objective for the benefit of all Canadians, giving strength and balance to our growth (Lib 1965, p317).

Likewise, while growth had previously been seen as a means to achieve full employment, the NDP argued that employment was now the means to achieve growth: "By maintaining a high level of employment we will greatly increase Canada's Gross National Product" (NDP 1965, 320). Similarly, the Conservatives noted, "It is estimated that higher education contributes 40% to our rate of growth" (Con 1965, p321). Even national unity and sovereignty were connected with growth: "Canada can preserve its sovereignty as a nation only as it expands to the maximum national development and growth. The Progressive Conservative Party will give Canada leadership in its expansion to make proper use of its resources and to develop markets within Canada and abroad" (Con 1965, p322). Thus, while growth had previously been a means to other ends, it was increasingly an end in itself, to be achieved through multiple means.

By 1968, with the Liberals continuing to form government, economic growth had become an overwhelming imperative. The Liberals declared: "Your new Liberal Government is dedicated to the active promotion of that growth. It will achieve it by developing the full promise of our natural, industrial and human resources" (Lib 1968, p337-8). The Conservatives promised to "stabilize the process of growth and particularly to isolate the causes and sources of inflation" (Con 1968, p358). They argued, we must "stimulate the economic growth process" through

"productive development and capital investment" (Con 1968, p359). Their aim was to control costs, contain unemployment, and achieve "an adequate rate of growth" (Con 1968, p359). Likewise, the NDP had come to view growth as essential to prosperity: "The condition for keeping our prosperity is accelerated economic growth and the rapid modernization and development of our industrial structure" (NDP 1968, p343). Growthmania[5] held sway.

Economic growth and the economy-environment relationship

At the beginning of the post-WWII period, environmental issues were present, but were neither consistently nor universally considered. These issues were framed as problems of conservation and wasteful use was to be avoided. In 1945, the Conservatives warned, "The unnecessary and wasteful exploitation of our forests, fisheries, soil, mines and water resources must cease" (Con 1945, p162-3). Excess waste would impact future generations: "In short, we have been living on the nation's capital and the people's birthright has been seriously diminished" (Con 1945, p163). The Conservatives declared, "This is a matter of such national importance that it will be given one of the top priorities at the Dominion-Provincial conference" (Con 1945, p163). However, environmental thinking was couched within the objective of development: "This course must be reversed. There must be development - but development with conservation, not development with unnecessary waste" (Con 1945, p163). The Conservative view remained utilitarian and anthropocentric, emphasizing human use. They stated, "Our policy will be based upon the principle of managing, developing and conserving our natural resources so as to achieve the greatest annual return from them consistent with their preservation as a continuing source of wealth for future generations" (Con 1945, p163). Meanwhile, the Liberals did not mention the environment.

In 1949, it was the Liberals' turn to emphasize both the development and conservation of natural resources, while the Conservatives were silent on the environment. The Liberals claimed Canada has "a great wealth of natural resources, much of which is still undeveloped" (Lib 1949, p183), and proposed "vigorous development of our natural resources [...] which will provide for the conservation and progressive development of agriculture, forests, mining, fishing, animal

[5] Coined by Herman Daly in 1977, growthmania is the pervasive belief in economic growth in modern society. This belief system ignores absolute material scarcity but treats human wants as absolute. See Daly, H. E. (1991). Steady-state economics (2nd ed.). Washington, D.C.: Island Press.

life, water-power, and national parks" (Lib 1949, p183). The CCF argued that conservation measures for soil and forests were necessary for long-range planning and prosperity (CCF 1949, p175). These ideas were also embedded within the logic of development and human use, reflecting a utilitarian conservation ethic.

In 1953, parties expressed a range of positions on the environment. The Liberals called for conservation and development of natural resources, and promised federal assistance for land, forest and water conservation projects. The Conservatives argued that natural resources "are a heritage which Canadians of our generation hold in trust" (Con 1953, p211). They promised to "protect and conserve our [resources] from undue depletion or exhaustion", but also "expand the use of our resources" by encouraging industrial research (Con 1953, p211). The CCF was more critical observing "At present our vast resources are being plundered by profiteers. Forests are being slashed without regard for conservation or the preservation of our forest production for future generations. Irreplacable mineral wealth is being wantonly depleted" (CCF 1953, p198). The CCF promised to "eliminate waste, end unemployment, and develop our resources with a proper application to the principles of conservation" (CCF 1953, p198). In contrast, the Labor-Progressive party simply supported natural resource development that "must be harnessed to serve the needs of Canada's people" (LPP 1953, p207).

Throughout the late 1950s and early 1960s, parties only sporadically mentioned the environment. In 1957, the Conservatives, Liberals and Social Credit parties did not mention the environment or conservation, while the CCF's Winnipeg declaration included strong language. They linked the immorality of capitalism and private profit to wasted resources: "even during a time of high employment, Canada's productive capacity is not fully utilized" (CCF 1957, 215). They continued, "the scramble for profit has wasted and despoiled our rich resources of soil, water, forest and minerals" (CCF 1957, p215). The solution they proposed was that Canada needed a program "for the wise development and conservation of our natural resources" (CCF 1957, p215). In 1958, the Liberals and Conservatives were again silent on the environment, while the CCF continued the narrative of development and conservation of resources (CCF 1958, p237). In 1962, the Liberals did not mention the environment, while the Conservatives only promised a program on water conservation (Con 1962, p267). The NDP did not discuss the environment, instead focusing on energy development - coal, oil, natural gas, electricity, and nuclear power (NDP 1962, p273). And in 1963 the Liberals, Conservatives, and NDP did not

mention the environment. Thus, for nearly a decade parties were nearly silent on the environment.

Then, in the late 1960s the environment quickly moved from an issue some parties only sporadically considered to an issue all parties talked about. In 1965, parties increasingly began to discuss the environment. The Conservatives promised natural resource development and conservation: a national power grid, National Energy Policy and National Water Policy. They promised to "preserve our water resources for Canada's needs, and will take measures for de-pollution and anti-pollution" (Con 1965, p322). Meanwhile, the Liberals talked about the "wise management" of water and proposed a Canada Water Policy (Lib 1965, p317). These positions continued to be framed as the need to develop and conserve resources. Assuming conservation supported economic growth, the Liberals declared, "A strategy for development, management and conservation of our resources is therefore essential to full growth of our economy" (Lib 1965, p317). The Conservatives promised to "Conserve and develop our coal, gas, uranium and hydro power" (Con 1965, p309), while the NDP did not mention the environment.

By 1968, all parties recognized the importance of environmental issues. The Conservatives presented an extensive proposal for pollution abatement and aimed "to provide an immediate base from which all pollution control in Canada can operate and become effective" (Con 1968, p356). The NDP talked about conserving Canada's resources and proposed pollution standards and controls (NDP 1968, p344). The Liberals promised to "place a high priority on intelligent resource development" (Lib 1968, p339), and to deal with air and water pollution. The environment, framed as a conservation, development, and pollution issue, had found its place on the political agenda.

In sum, during the post-WWII period economic growth evolved quickly, from a nascent idea of national income to full production to the imperative of economic growth. First pioneered by the Liberals, it was initially contested, but then adopted and supported by all parties. By the end of the 1960s, growth had become an end in itself and growthmania held sway. Meanwhile, the environment also rose in the consciousness of Canadian political parties. This issue was viewed through a utilitarian lens of conservation and development for human use. While the environment was at first only sporadically considered, by the late 1960s all parties wanted to do something about it. Throughout this period the economy and the environment were considered separately, and Canadian parties had not yet begun to discuss their relationship.

Growing Pains (1970-1982)

Economic growth

The relatively brief period between 1970 and 1982 differed significantly from the growthmania of the post-WWII period. P.E. Trudeau's Liberals continued to govern and economic growth remained important for all parties. However, in the early 1970s it was not the primary policy objective it had been previously. In 1972, economic growth was only one of the Liberals' four objectives: strengthen national integrity, ensure economic growth, personal fulfillment, and extend social justice (Lib 1972, p2). For the Conservatives, the overarching objectives, "economic growth and prosperity and well-being" were taken for granted (Con 1972, p1). For the NDP, full employment was their first priority, while growth was implicit: "New Democrats put full employment as the primary economic goal. If some price rises occur because of full employment, it is far better and cheaper to compensate victims of inflation – those on fixed incomes – than to squeeze the life out of the economy" (NDP 1972, p2).

In 1974, economic growth remained important, but it was not the sole or primary objective. The Liberals were silent on economic growth, instead focusing on inflation and the cost of living: food, housing and clothing (Lib 1974, p2). The Conservatives considered economic growth important, but did not consider it a panacea; they declared, "Unemployment cannot be overcome by simply increasing the tempo of economic activity" (Con 1974 paper 19, p2). Instead, growth was only one among several important economic objectives: "The aim of the Progressive Conservative national economic policy is to combine economic growth, price stability, taxation equity and regional development in a way that will ensure that the Canadian economy is serving the common good of all the country" (Con 1974 paper 19, p2). The NDP did not talk about economic growth, but instead focused on the cost of living, largely in relation to social programs such as jobs, minimum wages, and social welfare (NDP 1974, p7).

By 1979, growth and jobs were again top on the agenda. The Liberals presented GDP statistics, boasting "continuous growth during a difficult decade" despite "unstable global economic conditions" (Lib 1979, p1), while the Conservatives emphasized the "urgent need of measures to stimulate economic growth and create jobs across the country" (Con 1979, p2). In 1980, the Liberals promised to "develop industrial policies that will spur growth" (Lib 1980, p2),

while the Conservatives promised "To get the Canadian economy growing again – and Canadians working again" through economic stimulus through tax breaks and low mortgage rates (Con 1980, p4). The NDP promised jobs, a decent standard of living protected against inflation, and a healthy environment, but did not mention economic growth (NDP 1980, p2). Thus, economic growth lost its primacy in the early 1970s, but regained its position as the primary policy objective by the late 1970s.

Economic growth and the economy-environment relationship

A succession of international and domestic events in the late 1960s and early 1970s contributed to increasing instability, but also the collision of economic and environmental ideas. While party positions on economic growth oscillated briefly during the 1970s, their positions on the environment and the economy-environment relationship took an unexpected turn. In 1972, the environmental merits of continued economic growth were contested between the Liberals and the Conservatives. The Liberals argued that economic growth and a clean environment were compatible and that, when balanced, both could be achieved. They declared, "The Canadian government has led the world in the search for balance between life-giving economic growth and life-giving clean environment. It is not a question of choice. It's essential we learn how to achieve both" (Lib 1972, p6).

In contrast, the Conservatives deeply questioned the relationship between economic growth and the environment. They expressed "a concern for the environment and a feeling that Conservatives have a natural and special obligation to care for the environment, to ensure that the best and wisest use is made of our land, water and other resources" (Con 1972, p139). They continued, "In pursuing economic growth, we must not permit selfish squandering of the resources which comprise our common inheritance" (Con 1972, p139). Indeed, the Conservatives framed this as an environmental crisis and explicitly identified economic growth as one element of modern society causing environmental problems:

> Canada is blessed with one-quarter of the world's fresh water, one hundred thousand miles of ocean shore-line, one of the world's best concentrations of game, birds and fish, and unsurpassed forest and mineral wealth. However, industrialization, unplanned economic growth, population expansion, technology, urbanization, and a greater degree of affluence and leisure are contributing to the rapid deterioration of these vast resources.

> In a mindless pursuit of short-term gain, Canadians, and others, are levelling the forests, stripping the mineral resources, eroding the land, polluting the lakes, rivers, and streams, and poisoning the air with noxious gases. The effect on human and animal and plant life of this plundering of the environment is fast reaching crisis proportions (Con 1972, p137).

The idea that environmental problems are caused by economic growth was not simply mentioned in passing, but extensively discussed. In the context of urbanization, the Conservatives argued that growth undermined wellbeing: "the unrestricted and unplanned economic growth in many urban centers in Canada is causing pollution problems such as excessive noise and overcrowding which are taking a heavy toll of human health and are making the enjoyment of work and leisure in these areas virtually impossible" (Con 1972, p138). The Conservatives called for all Canadians to recognize this issue and take responsibility:

> The Progressive Conservative Party strongly believes that Canada is in very urgent need of a nation-wide attack on pollution to arrest and reverse the serious harm that is being done daily to the environment and to the quality of life in this country. The reckless exploitation and wanton destruction of Canadian natural resources cannot be allowed to continue. Such a programme must involve all Canadians and all levels of government. It must deal firmly and fairly with foreign developers. It must involve new and much tougher laws and regulations. And, most important, it must involve fresh recognition of the disastrous consequences of unregulated economic expansion and of the need for all Canadians to bear some part of the enormous but necessary and worthwhile burden and cost of preserving the environment (Con 1972, p138-9).

The Conservatives went beyond mere recognition of the problem, calling for a new balance between growth and the environment, and emphasizing the need for action based on a new vision of prosperity:

> Programmes and policies designed to abate pollution will only be successful in preserving the environment if they are accompanied by a genuine realization by all Canadians that unplanned and unregulated economic growth cannot be allowed to continue in Canada. We Canadians have too often been willing to tolerate the destruction of our environment as the price for short-term economic gain. In future, a proper balance

> must be sought between the need to preserve Canada's natural resources and quality of life, on the one hand, and the legitimate desire of Canadians to pursue economic goals, on the other. The greatest care must be taken that, in seeking to become an affluent society, Canada does not become an effluent society as well. The achievement of such a balance will require the most thoughtful planning and attention by both government and the private sector (Con 1972, p150-1).

The 1972 NDP platform did not mention the environment.

In 1974, the Liberals did not mention the environment, while the Conservatives continued to criticize and challenge status quo beliefs about economic growth. This time, the Conservatives questioned whether growth was compatible with either environmental or social wellbeing. They distinguished between quantitative progress (growth) and quality of life, arguing that the two could not be assumed to be linked:

> This means a change in direction since so much of our national effort has been aimed at quantitative progress. It has been assumed, for example, that the greater the Gross National Product the better the country is without regard to the debilitating effect economic growth can have on our way of life. While it is essential for the social good that Canada enjoy sufficient economic growth to meet its people's needs, we must liberate ourselves from this “bigger is better” complex. Bigger is not necessarily better. Otherwise why has Canada so many social problems after a generation of unprecedented material prosperity? Why are five million citizens living below the poverty level? Why have crimes of violence increased so dramatically? Why are so many resorting to alcohol and other drugs? (Con 1974, p132)

The Conservatives emphasized not only the social, but also the environmental consequences of growth: “Economic growth does not always prevent social problems -- it may even create them. It has contributed to the ecological challenge of pollution. It has created the demographic imbalance of Canada where about one third of our people live in three metropolitan areas” (Con 1974, p132). The Conservatives recognized the incompatibility of exponential growth and environmental protection: “it is increasingly obvious that we cannot continue to utilize our non-renewable resources along the exponential growth pattern of the past. The

Progressive Conservative Party believes that ours must become a "Conserver Society" and our Party recognizes that science and technology are a fundamental key to achieving such a society" (Con 1974, paper 9, p1). They also recognized the environmental foundations of wellbeing: "the protection of the environment is essential to the well-being of every Canadian and to our future as a people" (Con 1974, p136).

The Conservatives proposed a new direction, role for government, and vision of prosperity. Growth could not assume primacy by default: "If economic growth had to be given a priority in the past, it cannot justifiably claim an exclusive primacy now. We must give attention to the social development so long neglected" (Con 1974, p132). This implied a significant new direction: "This analysis shows that Canada needs a change of direction" (Con 1974, p132). They continued, "Our primary task should be to decide the way of life we want and then to demand policies based on that foundation. [...] It will reverse the assumption of the past, the claim that what is good for man is good for business" (Con 1974, p132). This new perspective entailed a vision of prosperity beyond material affluence and economic thinking: "Man does not live by affluence alone, and government policies should not be based on economics alone. Government was made for man, not man for government; and it should begin with man and his needs. When it does, government will change the direction it has been following" (Con 1974, p134).

The NDP did not discuss the relationship between economic growth and the environment. Rather, they framed environmental protection as "a duty to future generations" and presented seven practical proposals (NDP 1974, p13): avoiding waste, renewable energy, coordinated governmental control, banning supertankers, protecting estuaries, tougher penalties on polluters, and support for international efforts to deal with pollution.

By 1979, the discussion about the relationship between economic growth and the environment had disappeared and environmental issues were viewed primarily in the context of energy policy. In the context of "Escalating global energy prices" and the OPEC oil crisis, the Liberals focused on energy security, development, and conservation (Lib 1979, p54-58). They did not mention economic growth in relation to the environment, made no new environmental promises, and their environment section was subsumed under a section titled Energy and the Environment in which the environment took up half a page in a document over 80 pages long. These Liberal policies included Petro Canada, energy pricing control, energy conservation, and

development of northern pipelines (Lib 1979, p54-58). The Conservative strategy was twofold: energy conservation and development of oil and gas (Con 1979, p2-3). They also supported development of renewable energy and nuclear (Con 1979, 4-5). Thus, the deeply critical discussion about the environmental merits of economic growth was gone.

There was minor recognition of the environmental problems of industrialization. The Liberals declared, "The Liberal government has long recognized the danger of large-scale environmental abuse through uncontrolled development and rampant industrialization" (Liberal 1979, p58). In contrast, the Conservatives were concerned that Canada was being de-industrialized, saying "we're going backwards" (Con 1979, p57). However, these statements are the closest these two parties come to the debate about the economy-environment relationship of the early 1970s.

Environmental issues continued to be framed as energy issues in 1980. The Liberals' environmental concerns were framed in terms of energy efficiency and conservation, within the scope of energy security. The Conservatives did not discuss environmental issues or propose new environmental policies, but simply reported on their record of controlling acid rain and developing an international airborne pollution agreement (Con 1980, p6). The NDP did not have an environment section, although they promoted environmental policies such as energy conservation, renewable energy such as wind and biomass, recycling, and public transportation within their energy strategy (NDP 1980, p5). Even still, the vision of a significantly different Canadian industrial strategy existed. While the Liberal focus was on energy, industrial, and regional development, they saw renewable energy as an inevitability: "In the long term, Canada must depend on renewable energy. Other sources will get more and more expensive, and will continue to be major pollutants" (Lib 1980, p2). The NDP also criticized Canada's industrial strategy: "The NDP would like to see an industrial strategy that would emphasize small business and de-emphasize the kind of "rip-and-run" resource exploitation that has plagued our economy for so long" (NDP 1980, p16).

Thus, from 1970 until 1982 the debate about the merits of economic growth and its compatibility with environmental objectives emerged and then disappeared. In the early 1970s, economic and environmental ideas were considered in relation to one another, at least by the Liberals and Conservatives. The Liberals claimed that economic growth and environmental protection were compatible in 1972, but did not mention the environment in 1974. However, the

Conservative party presented scathing critiques of economic growth on social and environmental grounds. The NDP did not engage in thinking about the relationship between the economy and the environment. By 1979 this discussion was gone, replaced by ideas about energy security, development, and conservation.

Return to growthmania in a time of neoliberal globalization (1982-2008)

Economic growth

The period of neoliberal globalization saw a return to pursuing economic growth. Growth was a primary objective for both the Liberals and Conservatives. For example, in 1984 the first two sections of the Conservative platform were "Managing economic change" and "A focus on growth." Likewise, the Liberals declared, "our basic task as Liberals and as a government is to give priority to the economy" (Lib 1984, p10). They proposed "It is growth that will allow us to afford better protection for the disadvantaged and to pass on the liberal heritage of compassion to the less fortunate members of our society" (Lib 1984, p10). The NDP did not mention growth, but promised jobs. If growth had briefly left center stage in the 1970s, it was back.

Throughout this period, economic growth was a primary, overwhelming objective seen as inherently good. For instance, in 1993 the Liberals declared, "Liberals, unlike Conservatives, fundamentally believe that government can be a force for good in society. Economic growth is not a matter for market forces alone" (Lib 1993, p10-11). Similarly, in 2000 the Conservatives declared, "Economic growth is the means to achieve all other goals we might set for our society. Only with increased prosperity will Canadians enjoy first class public health care, access to quality public education and a reliable social safety net" (Con 2000, p1). Pursued by the government, economic growth was the means to all other desired ends.

Moreover, GDP growth was specifically credited as the best measure of prosperity. In 2004, the Liberals declared, "The best way to get a sense of how a nation's economy is performing – and whether a nation's citizens are benefiting – is to measure the growth of its Gross Domestic Product on a per capita basis" (Lib 2004, p38). This mainstream faith in economic growth persisted until 2006: "A Conservative government will reduce job-killing business taxes to create jobs and grow Canada's economy – for all of us" (Con 2006, p16). Thus,

in the period 1982 – 2008 economic growth held primacy as important, normatively good, and as a means of measuring and achieving prosperity.

Economic growth and the economy-environment relationship

During the period from 1982-2008, environmental issues were initially much less prominent than economic issues. Early on, the Conservatives recognized the need to shift or redefine what growth meant. In 1984, the conservatives emphasized the importance of changing the nature of growth: "And perhaps most importantly, managing change means changing our attitude towards growth. It means ending our complacent reliance on natural resources, and shifting our efforts to human resources" (Con 1984, p6). Yet the Conservatives had no section on the environment. The Liberals and NDP proposed practical environmental policies that did not challenge the status quo or address the economy-environment relationship.

In 1988, the Conservatives promised practical proposals that aligned with sustainable development thinking, while Turner's Liberals' made the environment a priority. The Liberals declared "After four years of Mulroney neglect, the Liberals will make the environment a top priority" (Lib 1988, p2). They promised to reverse Mulroney's cuts to environmental programs, to push for a Clean Air Treaty with the US, to "get tough on environmental offenders", and proposed an international environmental tribunal to help with global environmental protection (Lib 1988, p2). The NDP made practical proposals, including an acid rain treaty with the US and an environmental bill of rights (NDP 1988, p30). The emerging Reform Party had a "Green Plank" that promised "no economic development without regard to long-term environmental costs and implications; no environmental regulations without regard to economic costs and social implications" (Reform 1988, p5).

In 1993, the Conservatives and NDP did not mention the environment, while the Liberals discussed the environment as related to, but compatible with economic aims. Yet, besides the Reform Party, neither the economy-environment relationship nor the link between economic growth and the environment was discussed.

Diverging party positions on the economy-environment relationship

From 1993 onwards, three distinct approaches to the economy-environment relationship emerged. These approaches can be distinguished by their underlying assumptions about

economic growth: the Conservatives were largely silent on the environment while pursuing economic growth; the Liberals held that economic growth and environmental objectives were compatible and reconcilable; and the NDP and Greens challenged economic growth, while maintaining that other economic objectives and environmental protection could be reconciled.

Conservatives – noncommittal avoidance

Since 1993, neither the environment nor the economy-environment relationship have been major issues for the Conservatives. Conservative environmental policies rarely mentioned the relationship between economic growth and the environment, and at times the environment was almost entirely omitted. Their 1997 platform did not mention the environment, but in 2000 they proposed ambitious environmental ideas, including that the economy and the environment should be balanced. They declared, "The Progressive Conservative Party has always believed in balancing economic/human progress with the need to maintain a clean, healthy and sustainable environment" and talked about an "ecological deficit" (Con 2000, p15). In 2004, the Conservatives made cursory mention of the environment, while in 2006 they mentioned the environment, but this took only ½ page of their platform. These proposals did not challenge the status quo, but relied on technological development (Con 2006, p37). The Conservatives largely avoided the economy-environment relationship and environmental critiques of growth.

Liberals – aspiring to reconcile economic growth and the environment despite contradictions

From 1993-2008, the Liberal position reflected the faith that economic growth and environmental protection could be made compatible under sustainable development. In 1993, the Liberals called for a new vision and fundamental shift: "Managing economic development and human growth without destroying the life-support systems of our planet demands of Canadians a fundamental shift in values and public policy. We must aspire to be less wasteful of our natural and human resources, to place greater worth on the welfare of future generations, and to take pride in maintaining a healthy, productive Earth" (Lib 1993, p63). This vision "incorporates the qualities of thrift, collaboration, and a special physical and spiritual tie to the land that are important to the Canadian identity" (Lib 1993, p63).

These ambitions attempted to integrate environmental and economic goals. They declared, "the national environmental agenda can no longer be separated from the national

economic agenda" (Lib 1993, p64) and asserted that the government must adopt "economic and environmental agendas that converge" (ibid, p64). This vision reflected the economic framing of sustainable development: "Sustainable development – integrating economic with environmental goals – fits in the Liberal tradition of social investment as sound economic policy. Preventive environmental care is the foundation of the Liberal approach to sustainable development; it is a wise public investment like preventative social policies and preventive health care" (Lib 1993, p63). To reconcile the economy and the environment under sustainable development, the Liberals used a knowledge-based economy framing that reflected a disembedded view of the world. This framing rejected the idea that material limits would prevent continued production and economic growth: "Our country was built by immigrants who were drawn to Canada by the promise of land. What the land could produce was limited by nature. What the mind can produce is limitless" (Lib 2000, p7). Technology was key and the Liberals promised to "Demonstrate how economic prosperity and environmental sustainability can be united through innovative technology and smart regulation" (Lib 2006, p6).

However, they recognized that reconciling economic growth and reducing greenhouse gas emissions remained unresolved. Notably, they emphasized, "The greatest challenge in coming to grips with climate change is to break the long established linkage between economic growth and increased greenhouse gas emissions. Canada's industrial base is energy-intensive, and energy use is responsible for about 85% of Canada's greenhouse gases" (Lib 2006, p68). They also recognized that no solution existed to deliver this promise: "Clearly, the world needs technology breakthroughs to reconcile economic growth with a much reduced impact on climate" (Lib 2006, p68). Throughout this period, the Liberals maintained that economy and environment were compatible despite recognizing the contradictions between growth and environmental objectives.

NDP and Greens – reject growth and propose alternatives

From 1993-2008, both the NDP and Green parties contested the mainstream pro-growth position on the economy and the environment, criticizing GDP (and GNP) as an appropriate measure of wellbeing. As early as 1997, the NDP called for "A new way to measure progress that includes factors such as unemployment and income distribution, community and individual

health, environmental quality and resource depletion" (NDP 1997, p3). The Greens also criticized economic growth:

> The Gross National Product is a flawed indicator of our economic progress. Why? Because it adds, but it never subtracts: all economic activities, even those that have catastrophic effects such as the depletion of our East Coast fisheries, are counted as economic gains, with no thought to the social and environmental consequences (GRN 2000, p5).

Instead, both the Green party and NDP proposed to introduce the Genuine Progress Indicator (NDP 1997; GRN 2000; 2004).

These parties proposed alternative visions of prosperity and environmental proposals that differed dramatically from those of the Liberals and Conservatives. A new vision of progress was needed:

> some days we feel like we are just barely getting by. Over the last twenty years, we have seen more people working longer hours for less pay, while many other people can't find any work at all. We seem to lack time for the really important things in life, such as family and friends. People are starting to wonder how much more "progress" they can take. In fact, we're not sure that the planet can take it either. Our economy is not sustainable and our quality of life is not improving, but the traditional politicians continue to ask for one more chance... The Green Party has a new proposition for Canadians. We're asking voters to redefine progress and take a more active role in their government (GRN 2004, p4).

In particular, the Greens challenged the idea of progress as more: "Less is More: When it comes to energy, we can build more power plants and create more pollution, or we can take steps to rebuild factories, renovate homes, refit businesses, redesign products, reassess priorities and reduce waste" (GRN 2004, p39).

This new vision also included an embedded view of the economy. The NDP emphasized that "no economy or society can exist independently of the environment" (NDP 2000, p6). Similarly, the Green party emphasized ecological limits to growth: "All life on earth shares a volume of land, water, air and sunlight that will never increase. Yet many governments share the deadly misconception that human societies can grow boundlessly. The Green Party seeks to

promote an understanding of the finite carrying capacities of our planet, as well as emphasize the impact human activities have on neighboring ecosystems" (GRN 2004, p44).

These critiques of growth and an embedded view of the economy demanded a different vision of the economy. The Greens emphasized that growth was a core problem and the need for economic transformation: "Our current economic approach, which revolves around exploitive economic growth, has caused great harm to our environment and our health - but it hasn't been able to solve economic injustices like unemployment and child poverty. What can we do? The Green Party believes that there is a better way to do business. It's time for our economy to make the transition from growth to sustainability" (GRN 2000, p4). This view meant the need to "respect the limits of what nature can support" (GRN 2004, p44). Similarly, the NDP declared, "We must ensure that renewable resource use does not exceed rates of regeneration, that non-renewable resource use does not exceed the rate at which sustainable renewable substitutes are developed, and that pollution does not exceed the capacity of the environment to absorb it" (NDP 1997, p3).

The Green and NDP proposals differed significantly from the mainstream Liberal and Conservative positions, emphasizing an economic transition that included changes in the nature of work and green jobs. Their proposals attempted to reconcile the economy and environment by redefining economic prosperity and jobs: "We all want jobs and economic prosperity, but we also want to protect the air we breathe, the water we drink and the food we eat. With leadership from the federal government, working families can have both environmental and economic security" (NDP 2000, p7). In turn, the Greens proposed to "Work with nature, not against it, to create "green collar" jobs" (GRN 2004, p5). Thus, the NDP and Green parties held positions that rejected economic growth, adopted an embedded view of the economy, and proposed significant transformations.

In sum, the period from 1982 – 2008 was dominated by the pursuit of economic growth. Environmental discussions attempted to reconcile environmental objectives with the economy, and resulted in three divergent approaches centered on interpretations and critiques of economic growth. The Liberals continued to attempt to reconcile economic growth with the environment, while the Conservatives largely avoided questioning growth and the economy-environment relationship. Meanwhile, the Greens and NDP critiqued GDP growth and their proposals

reflected attempts to resolve economic and environmental objectives by transforming the economy, the nature of work, and measures of prosperity.

Emerging instability (2008-2017)

Economic growth

In 2008, economic growth was a clear concern for all parties as reflected in their stated priorities, but at the same time it almost vanished from their platforms. In contrast to previous periods, growth was only mentioned a handful of times by most parties, and never in relation to the environment. Economic growth was mentioned as a positive objective in the Conservative platform, while the Liberals' first priority was growing the economy. However, the Conservatives and NDP only mentioned growth once each. For the NDP, one of their job-focused trade strategies was to "Influence competitive advantage by ensuring that the macro-economic environment is growth-oriented" (NDP 2008, p8). Both the Conservatives and Liberals emphasized quality of life rather than living standards (per capita GDP) or economic growth. Thus, in 2008 lack of economic growth became a major problem of concern, while simultaneously growth virtually disappeared from dominant discourse.

While growth was not talked about in 2008, different perspectives on growth re-emerged in 2011 and 2015. For the Conservatives, economic growth was central. In 2011 the Conservative plan was titled "Stephen Harper's low-tax plan for jobs and economic growth" (Con 2011, p1), and they claimed that jobs and growth were central to Canada's success. In 2015, they declared, "protecting Canada's economy is our number one priority" (Con 2015, p3). Economic growth was central to this vision: "Of course, we'll also continue to protect Canadians in a dangerous and uncertain world, keeping our streets and communities safe. But ultimately, all of these things depend on a strong and growing economy" (Con 2015, p4).

For Liberals, economic growth was not the sole objective; rather, it was seen as taken-for-granted, a means to other ends, or an inherent reality. In 2011, the Liberals emphasized equal opportunity as their priority rather than growth: "Our platform in this election has one overriding objective: to make equal opportunity a reality for every Canadian" (Liberals 2011, p3). Yet, the Liberals viewed growth as inherent to the globalized economy, which Canada was part of. The Liberals emphasized that they saw Canada locked into international competition for jobs and

growth: “Developing countries that used to rely on low-cost labour are shifting toward more valuable knowledge-based economic activity, and becoming stronger competitors on the world stage. In this constant race for growth and jobs, no country can afford to stand still” (Lib 2011, p13). In 2015, the Liberals treated growth as central. Their plan focused on the economy first: “A strong economy starts with a strong middle class. Our plan offers real help to Canada’s middle class and all those working hard to join it. When our middle class has more money in their pockets to save, invest, and grow the economy, we all benefit” (Lib 2015, p4). For them, the objective was also economic growth: “We will kick-start investment in innovation to grow our economy and create good, middle class jobs” (Lib 2015, p15). For the Liberals, growth was an inherent part of the system.

In contrast to the Liberals and Conservatives, the NDP position was complex and evolving. The NDP neither framed the 2008 situation as a crisis of growth (recession) nor consistently supported economic growth. In 2008 they implicitly rejected low GDP growth as an indicator of crisis and instead focused on long-term change: “There are many ways to measure the success of our country. All kinds of statistics. Some are more important than others. For me, the most important measure is the success of ordinary Canadians. In short, I am proposing real change from the way things have been done in the past. Not just change from the last 25 months, but change from the last 25 years” (NDP 2008, p4). Instead, the NDP focused on jobs as the first priority of their economic platform. Again in 2011, the NDP platform avoided using the term economic growth. The word “growth” was only used once and only to refer to an increase of child care spaces (NDP 2011, p5). Instead, the NDP emphasized helping families and improving livelihoods. However, by 2015, the NDP also supported economic growth. Their platform was framed as “kick-starting the economy and creating good jobs” (NDP 2015, p2). Thus, the NDP moved from criticizing statistics to silence on growth to articulating a pro-growth position. By 2015 all major parties supported economic growth.

Only the Green Party continued to challenge and reject economic growth. They insisted, “We need to correct the perception that economic success is dependent on growth and build understanding of the benefits of a steady-state economy (non-boom/bust economy). Continued exponential growth is counter to the realities of a finite planet” (GRN 2015, p65). Instead of growth, the Green Party emphasized well-being and doing more with less: “Greens are committed to improving our collective well-being. Greens recognize that we need new

measurements of our societal health and prosperity. Greens know that the notion of unending economic growth is a dangerous illusion. We can do far more with far less" (GRN 2015, p11; GRN 2008). The idea of more-is-better and the pursuit of economic growth were incompatible with the limits of a finite planet. Yet they also acknowledged the persistence of GDP despite their critiques: "Most economists agree that GDP is a poor measure of economic wellbeing or quality of life, yet our government continues to use it as the basis for its most important taxation and policy decisions" (GRN 2015, p13). In response, the Greens advocated for alternative indicators that would report well-being more accurately than GDP.

Economic growth and the economy-environment relationship

Conservatives – economic dominance, environmental avoidance

The Conservative position evolved from avoiding explicit mention of the relationship between economic growth and the environment in 2008 to viewing them as going hand-in-hand in 2011 to seeing them as needing to be balanced in 2015. Environmental protection never took priority over economic goals. In 2008, the Conservative environmental policies were specific, did not discuss the economy-environment relationship or economic growth, and did not propose significant changes to the status quo. While they claimed to have acted on the environment (Con 2008, p31), in their introduction neither health nor environmental wellbeing were mentioned. Environmental issues took up less than 2½ pages of the Conservative platform and the phrase "climate change" was not mentioned. Instead, the Conservative's 2008 position on the economy and environment was found in their economic plans. For example, they supported Canada's natural resource industries and viewed energy resources as important to continue developing: "Our abundant natural resources, especially in our vast, untapped Arctic, have become key strategic assets as the world focuses more on energy and the environment" (Con 2008, p22). Thus, while the Conservatives acknowledged environmental issues, they continued to favour fossil fuel and natural resource development.

In 2011, the Conservatives claimed that "a healthy environment and a strong economy go hand-in-hand" (Con 2011, p40). They made environmental commitments to reduce greenhouse gas emissions through research and development, efficiency, and "clean energy" such as clean coal and carbon capture and storage (Con 2011, p41-42). At the same time, they promised to

"help ensure the success of traditional industries", including agriculture, Canadian sealing communities, forestry, mining, energy, and fisheries (Con 2011, p53). They promised "strong support to protect, sustain, and promote" these industries (Con 2011, p53). The Conservatives did not explicitly state whether they believed economic and environmental objectives were compatible, or if economic growth was compatible with environmental protection. Rather, they promised to pursue both without addressing the compatibility between them.

In 2015, instead of promising to do both, the Conservatives talked about balancing economic and environmental goals: "A re-elected Conservative Government will continue to balance what's best for our climate with the needs of our economy, recognizing the importance of both the environment and our economy to all Canadians" (Con 2015, p146). Despite claiming that both were important, the Conservatives opposed environmental action that threatened natural resource development. For example, they declared:

> Canadians are committed to an effective approach to climate change, and so are we. We support an approach that benefits both the environment and the economy. The solution to the climate change challenge must come from innovation, not deprivation – through technology and Canadian ingenuity, not by closing down our vital natural resources industries or imposing job-killing carbon taxes (Con 2015, p146).

Moreover, the Conservatives presented environmental policies as threats to economic goals. For example, the Conservatives opposed "Imposing billions of dollars in carbon taxes on Canadian businesses that will put them at a major competitive disadvantage and raise the price of everything for Canadian consumers" (Con 2015, p55). Similarly, they objected to "Blocking resource development so that Canada's energy resources will stay in the ground instead of being developed responsibly to generate investment and jobs" (Con 2015, p55). Thus, the Conservatives opposed anything that threatened the economic growth and jobs by impeding the development of Canadian natural resources and manufacturing, while villainizing environmental proposals.

Liberals – reconciling economic growth and the environment

The Liberals consistently viewed economic growth and the environment as compatible, and their relationship as reconcilable. In 2008, the Liberals discussed economic and environmental goals and the need to reconcile them: "We need our economy to be more

competitive and to create more jobs. But we also need it to be sustainable, so that we are able to preserve the magnificent natural heritage with which Canada has been blessed" (Lib 2008, p24). They continued, "We need to reconcile our way of life with our environment, our health, and our moral obligation to leave our children clean air, clean water and a healthy planet" (Lib 2008, p24). To this end, their Green Shift plan proposed to make economic and environmental goals compatible by transitioning to a low-carbon economy. This transition was framed as an opportunity to do both: "Canadians need to reduce our economy's reliance on polluting fossil fuels and we need to become more energy efficient. Doing so will be good for our economy and the environment: not only will we reduce our greenhouse gas emissions and other sources of pollution, but also become more competitive in a carbon-constrained global economy while creating good and lasting jobs" (Lib 2008, p7).

After Stéphane Dion's 2008 Green Shift plan, the idea that the economy and the environment needed to be reconciled was dropped. In 2011, the Liberals promised both economic growth and a healthy environment. Growth and environmental protection were mutually reinforcing: "In countries with smart leadership [...] brain power, good policies and smart investments are building a future in which economic prosperity and environmental responsibility are mutually reinforcing" (Lib 2011, p40). In 2015, the Liberals assumed that economic growth and environmental protection were compatible: "Canadians want a government they can trust to protect the environment and grow the economy. Stephen Harper has done neither. Our plan will deliver the economic growth and jobs Canadians need, and leave to our children and grandchildren a country even more beautiful, more sustainable, and more prosperous than the one we have now" (Lib 2015, p39). The Liberals promised to "develop real climate change solutions, consistent with our international obligations to protect the planet, all while growing our economy" (Lib 2015, p39). They relied on the promise of technology: "Clean technology can deliver real benefits for our environment and our economy" (Lib 2015, p40). Simply put, the Liberals presented this as a simple win-win situation.

NDP – from avoiding growth to claiming growth and environmental protection are compatible

The NDP position was evolving and complex. In 2008, the NDP made ambitious environmental promises, focused on jobs, and did not talk about growth. The NDP's proposed New Energy Economy focused on creating green jobs without mentioning growth. Retraining

and investment in the new energy economy would create green collar jobs (NDP 2008, p4). This plan did not ignore global economic conditions. Rather, it recognized global competition for green jobs as an opportunity (NDP 2008, p7). In this way, the NDP proposed to reconcile economic and environmental objectives, but was silent on whether economic growth was necessary for or compatible with either objective.

The 2011 NDP plan was solutions-oriented and did not articulate their underlying philosophy or goals. They did not discuss economic growth or the economy-environment relationship, but instead proposed concrete environmental policies. These proposals were substantive and potentially transformative. For example, they promised to adopt legislation on the Climate Change Accountability Act (NDP 2011, p2) and their green jobs plan proposed "re-engineering of energy-dependent industries to help them adapt to a low carbon world" as well as support to help workers transition to a clean energy economy (NDP 2011, p13).

In 2015, the NDP changed its position to place importance on economic growth as well as jobs. Now, the NDP argued that economic growth and environmental protection were compatible and could be pursued simultaneously: "Reducing greenhouse gas emissions and making polluters pay for the pollution they produce are part of the NDP's plan to grow the economy while protecting the environment" (NDP 2015, p49). Clean energy was the key to creating growth and jobs while reducing emissions (NDP 2015, p22). These environmental policies were seen as good in the context of a competitive globalized economy: "Not only is it the right thing to do, but it will also help ensure our long-term prosperity as a nation in a competitive global economy" (NDP 2015, p23). Thus, although the NDP position began this period avoiding growth, it ended aligned with the mainstream Liberal position that economic growth and the environment are compatible and should be pursued simultaneously.

Greens – deep critique: incompatibility of economic growth and the environment

While the Green party consistently critiqued and rejected economic growth as an adequate measure of wellbeing, they argued that an economic transformation was needed to reconcile the economy and the environment. Reconciling the economy and the environment required changing the way we measure prosperity and they proposed alternate indicators that included the environment in national accounts. Based on new measures and a new vision of well-being, they argued that there were ways to make the economy and environment compatible:

"Canadians have (by large majorities) continued to say they will not trade away environmental protection to help the economy. In fact, Canadians understand that ending waste is good economics. Real solutions enhance the economy and the environment at the same time" (GRN 2015, p49). They emphasized the potential compatibility of economic and environmental goals: "Meanwhile, action on climate change can be good for our economy. Countries that improve their energy efficiency and reduce their demand for fossil fuels by utilizing renewable sources of energy will be the least negatively impacted by a future energy crunch" (GRN 2008, p34).

This critique required economic transformation on a scale comparable to what occurred after World War II: "Improvements in labour productivity drove economic growth after World War II. We must now repeat the exercise as we improve the efficiency of resource and energy use" (GRN 2015, p11). The Green Party proposed transformative ideas including a national policy on climate and energy, a jobs strategy for a green economy, greatly reducing fossil fuel extraction and burning, and putting a price on carbon (GRN 2015, p20). In contrast to the Conservative position, the Greens argued the environment should be prioritized over economic issues such as fossil fuel development. The declared, "Because of the impact on the climate, the Green Party of Canada believes that the global extraction and burning of fossil fuels must be greatly reduced, and most must be replaced by sustainable energy as soon as possible" (GRN 2015, p43).

In sum, the mainstream support for growth persisted. Although largely not mentioned in 2008, economic growth was a dominant objective held by all the major parties. The Liberals and Conservatives continued to place importance on economic growth. Meanwhile, the NDP, initially silent on the issue, also began to support growth in 2015, leaving only greens opposed. However, parties held widely divergent positions on economic growth and the environment. The Conservatives made economic growth a central tenet, and shifted from avoiding the issue to the idea that the environment and economy go hand-in-hand to the need to balance economic and environmental goals. The Liberals held that growth was an inherent part of the globalized economy. They first proposed that economic growth and environmental protection could be reconciled, and then simply promised both could be achieved. The NDP at first avoided talking about growth while promising a shift to green jobs, but then embraced growth and claimed it

could be pursued while protecting the environment. Only the Green party consistently opposed growth, calling for new measures of prosperity and an economic transformation.

Synthesis: The story of economic growth and the environment

Looking at Canadian political party manifestos over the last 150 years reveals an intriguing story of economic growth and the environment. Economic growth was not always a primary policy objective and its nature has evolved over time. With the founding of the country and throughout the National Policy era, economic growth was virtually unmentioned; it was neither an articulated objective nor considered the responsibility of the state. Although economic growth may indeed have occurred, this was not explicitly acknowledged. From 1929 until 1945, precursors to economic growth emerged, including national wealth, standards of living, production, and national income. However, growth remained less of a priority than other objectives such as distribution, equality, and employment. From 1945 until 1970, political debates about economic growth developed rapidly. During this period, economic growth evolved from precursors such as full production, to being pioneered by the Liberals as a political strategy and contested by other parties, to consensus among parties that it was desirable. Growth also went from being a means to achieving other ends to being an end in itself. By 1968 economic growth had become an overwhelming objective, explicitly pursued by all major Canadian political parties. In the 1970s, growth became only one of several priorities to be balanced. At the same time, it was questioned and contested on both social and environmental grounds. However, by 1979, growth was again at the top of the agenda. After 1982, major parties returned to their pursuit of growth. It was again seen as a panacea, a means to achieving all other ends, and the best measure of prosperity. With the 2008-2009 financial crisis, parties avoided talking about growth despite declaring it a priority. Nonetheless, it was still promised and pursued by all major parties. Thus, in Canadian federal politics economic growth has evolved over time and can be understood as having multiple dimensions. Economic growth occurred but was unmentioned, it was contested but gained consensus, it was linked to achieving other objectives, it was treated as a panacea, it was seen as normatively good, and it was treated as a structural constraint.

While economic growth emerged, evolved, and persists, the environment also emerged and evolved as an issue. Environmental ideas emerged in 1917, framed as the utilitarian need to both conserve and develop natural resources for human purposes. Although environmental issues

were not mentioned from the Great Depression until the end of WWII, ideas about "unnecessary and wasteful exploitation" of Canada's natural resources re-emerged in 1945 (Con 1945, p162-3). Discussion of the environment surged in the post-WWII era, peaking in the late 1960s and early 1970s.

The early 1970s is a critical turning point in this story. This was the first time environmental and economic ideas significantly encountered one another, and these ideas collided. The Conservative party questioned and denounced the continued pursuit of economic growth on environmental and social grounds in 1972 and again in 1974. In contrast, the Liberals argued that economic growth and a healthy environment must be balanced in 1972, but did not mention the environment in 1974. However, the relationship between economic growth and the environment moved quickly off the agenda. Environmental ideas were framed in terms of energy conservation, efficiency, and development by the 1979 election. The debate about whether economic growth and the environment were compatible was gone.

After 1982, the mainstream position on the relationship between the economy and the environment has been the growth-based compromise of sustainable development: that economic growth and environmental protection are compatible. From 1993 onwards, major parties held divergent positions. Each party attempted to reconcile the economy-environment relationship based on different assumptions about growth. The Conservatives avoided the relationship, the Liberals continued to insist that economic growth and the environment are compatible, and the NDP and Greens both contested growth. Since the 2008-2009 financial crisis, a consensus has emerged among major parties on the desirability of economic growth, as well as the compatibility of environmental protection with continued economic growth. Only the Green party continues to challenge this imperative.

The paradox of growth

The story of growth presents a paradox. Accumulating evidence indicates that economic growth is uneconomic, after a certain point does not contribute to social wellbeing, and undermines ecological integrity. Canadian politicians have explicitly recognized the limitations of growth, especially during the 1970s, but also since then. However, even in the face of accumulating evidence, economic growth continues to be demanded, advocated for, and pursued as a primary policy objective. This paradox has three main features that have no apparent

explanation: the changing, multi-dimensional nature of growth; the surprising outcome of the 1970s; and the contradictory and seemingly irrational positions of political parties since the 1970s.

First, constructivist, materialist, and functional explanations are unable to account for the changing, multi-dimensional nature of growth. For the period 1945-1970, a constructivist explanation, which regards human ideas and construction as the driver of change, appears to fit the story of growth. National economic accounts, which evolved to focus on GDP, were introduced in Canada in 1952 (McDowall 2008), and economic growth did not become an explicit political strategy until after Canada's system of national accounts were developed and institutionalized. However, constructivism does not explain why growth existed as a phenomenon prior to being conceptualized and measured. During the national integrity and national policy periods, Canada experienced extensive growth long before economic growth was conceptualized and pursued. Moreover, constructivism does not explain why, during the recessions of the 1970s and 2008-2009, political ideas and discourse followed what happened in the economy rather than the other way around. In both instances, economic growth virtually disappeared from party platforms in response to changes in the economy. This refutes a strong constructivist explanation that focuses purely on the causal role of ideas.

While materialism and functionalism explain some features not captured by constructivism, they are also insufficient. A structural explanation such as the Treadmill of Production (ToP) more accurately explains how growth has been perceived since the 1970s than constructivism. The Liberals voiced the global dimension of this structural constraint: "In this constant race for growth and jobs, no country can afford to stand still" (Lib 2011, p13). However, a purely materialist explanation in which ideas and norms are the product of socio-economic relations does not explain why growth occurred both before and after 1945, but that growth increased rapidly only after being pursued as an explicit objective 1945 onwards.

Likewise, the normative dimension of economic growth is not accounted for by either materialist or functional explanations. In particular, functionalism has a historical "economic growth persists in order to" logic (Kincaid 2007). Hence, functionalism accounts for how economic growth became seen as a panacea in order to achieve social objectives in the post-WWII period, but not its normative dimension. These observations mean that, on their own, existing explanations are unable to explain the changing, multi-dimensional nature of growth.

Instead, co-constructive and coevolutionary approaches would be better suited to explaining the story of growth.

Second, how do we explain the surprising change in thinking about economic growth and the environment during the 1970s? The relationship between economic growth and the environment appears to have been given due consideration by Canadian political leaders in the early 1970s. Conservative party platforms in 1972 and again in 1974 were deeply critical of economic growth on environmental grounds. Meanwhile, P.E. Trudeau's Liberals interacted with the Club of Rome on several occasions (Doern and Conway 1994), and their 1972 platform indicates that they were aware of the arguments of *Limits to Growth*. However, the Liberals failed to articulate these concerns. The story of growth in the 1970s clearly refutes the argument that political parties have been either unaware of or unwilling to engage with the question of whether economic growth and environmental protection are compatible. Indeed, all parties have at one time explicitly recognized that they are incompatible, and that GDP growth is an inadequate measure of prosperity that should be replaced.

Given this evidence, how can we explain the outcome of the 1970s? One logical response, following the 1972 publication of *Limits to Growth*, would be for parties to consider the evidence and ethical arguments for and against growth. Since major parties clearly opposed growth on both social and environmental grounds, we would expect them to attempt to navigate away from economic growth and increasing ecological destruction, or at least to continue to engage with this important debate.

Yet in the 1970s we observe the opposite. One surprising result is that the Liberals adopted the position that growth and environmental protection are compatible a mere few months after the publication of *Limits to Growth*, which argued the opposite. Then, contrary to what we might expect, by 1979 the debate about economic growth and the environment had disappeared and environmental issues were framed as energy issues. In the 1980s, the idea that growth and environmental protection are compatible re-emerged and continues to dominate. Parties have since adopted divergent positions on whether economic growth and the environment can be reconciled, with only minor parties challenging economic growth.

Although the re-emergence and domination of growth since the 1970s are less difficult to explain, the 1970s present a perplexing paradox. If, from both logical and ethical perspectives, growth is undesirable, then how do we explain the initial questioning of growth in the 1970s, but

then the near silence on it after the early 1970s? Arguments about the influence of neoclassical economists or the corporate lobby cannot explain outcomes in the early 1970s. P.E. Trudeau and his government engaged in rational planning, emphasizing the need for ecological rather than economic rationales for decision-making (Doern and Conway 1994). Since politicians recognized the limitations of relying on neoclassical economics and their ideas, Marxist theories such as ecological political economy and the ToP that claim that neoclassical economics was the major ideological force are insufficient. Moreover, neoclassical economics and monetarism only gained prominence in the late 1970s and early 1980s (Drainville 1995), so do not explain events in the early 1970s. Likewise, in the early 1970s the business lobby did not yet hold the power and influence that it does now. Thus, explanations that foreground the ideas and influence of economists are secondary; instead, political rationales, interests and constraints warrant greater attention.

The third counter-intuitive and unexplained observation is that, although all parties have explicitly recognized that economic growth and the environment are incompatible, over time more and more parties have adopted the position that growth and the environment are compatible. All major parties have questioned whether economic growth is compatible with environmental objectives and explicitly declared that it is not. Since 1972, the Liberals have maintained that economic growth and the environment are compatible, although they interacted with the Club of Rome in the early 1970s. The Liberals also explicitly recognized the need "to break the long established linkage between economic growth and increased greenhouse gas emissions" in 2006 (Lib 2006, p68). The Conservative position was deeply critical in the 1970s, but has remained pro-growth since and has been virtually silent on the relationship between economic growth and the environment. The NDP initially challenged economic growth in the 2000s. However, since 2015 the NDP began supporting economic growth and declared its compatibility with environmental objectives. Only the Green party remains opposed to continued economic growth. Thus, over time, parties at first critical of economic growth have adopted positions that economic growth and environmental protection are compatible and should be pursued simultaneously.

Why have parties increasingly come to support growth rather than challenge its desirability? And why did the Green party, as well as the NDP (until recently) continue to emphasize the ecological problems of continued economic growth, while the Liberals and

Conservatives adopted the opposite position? This pattern is in direct opposition to the hypothesis about how paradigms shift. This hypothesis proposes that identifying logical inconsistencies and ethical drawbacks of a paradigm's fundamental assumptions will lead to a transformative and relatively rapid paradigm shift (Purdey 2010; Schmelzer 2016). If this hypothesis were true, one would expect that the challenge and critique presented by the environmental sciences, and in particular the Club of Rome's Limits to Growth would have increasingly undermined arguments for economic growth, leading to a paradigm shift.

In sum, the story of growth in Canadian politics is a paradox that eludes explanation. Accumulating evidence clearly demonstrates that continued pursuit of economic growth does not provide a viable foundation for a viable and thriv ing society. If continued economic growth does not provide the benefits its proponents promise, and if it increasingly undermines the social, economic, and ecological foundations for a thriving society and society-nature relationship, why does growth persist and continue to be actively pursued? Explaining this paradox can help us find ways of living in harmony with the ecological realities of our planet.

Chapter 5: The Emergent Coevolutionary Framework

The separation of society and nature and the need for integration

While existing explanations do not adequately explain the paradox of growth, Chapter 2 identified the potential of integrative explanations that combine concepts such as co-construction and coevolution. However, the environmental social sciences most suited to provide an integrative understanding society and nature have only begun to develop the tools to meet this need. Starting in the 18th century, the social sciences evolved to view society as separate from nature (Lidskog 2001), and, in large part, social sciences such as classical sociology grew up without the environment in mind (Kish and Quilley 2017). Mainstream theoretical perspectives in sociology are anthropocentric, with the physical environment excluded from analysis (Lidskog 2001). This has led some to claim that sociology has an ecological blind spot (Murdoch 2001). Since the 1970s, the environment has gained increasing prominence, leading to the emergence of the environmental social sciences. Environmental social sciences such as environmental sociology have rejected much previous thought that was ecologically unsound, and built on the past where possible (Foster 1999). However, the environment has been largely treated as an add-on to existing bodies of knowledge (Foster 1999).

Environmental sociology continues to be haunted by the society/nature divide. Rooted in fundamentally different assumptions about the world, two major approaches to environmental sociology emerged: environmental realism and environmental constructivism. In the environmental realist tradition of Dunlap and Catton (1983), society is not independent of the non-human physical environment (i.e. nature). Rather, the environment is relevant, and human society is embedded in and a part of larger ecosystems and nature more broadly (Lidskog 2001). However, environmental constructivists caution against the dangers of realism, such as the reductionism and the biological determinism of sociobiology (Lidskog 2001). They argue that realists downplay the importance of social processes and causation (Woodgate and Redclift 1998). In contrast, constructivists view nature as constructed: nature is not objectively given, but symbolically constituted and culturally constructed. Yet constructivism has its own limitations. For instance, strong constructivism rejects the material foundations of society. According to this view, there is no objective environmental problem, and the focus should solely be on social

processes. In this way, constructivism significantly limits the explanatory possibilities of environmental social sciences (Woodgate and Redclift 1998).

This conceptual divide has driven calls for integration (Hannigan 2006). As environmental sociology re-orients its various theoretical approaches to account for nature, there is a need for whole-picture deep syntheses to systematically link theories and explanations of society, nature, and their relationships (Gunderson 2014). In particular, "What is needed now is a program that re-establishes the common foundations of the natural and human sciences, while respecting the right of the cultural sciences to claim a unique subject matter" (Reed and Harvey 1992, p354-5).

In contrast to realism and constructivism, a third and more nuanced approach has emerged, grounded in critical realism (Reed and Harvey 1992). Critical realism is a philosophy of science developed by Roy Bhaskar (1979) that provides a bridge between the natural and social sciences. In doing so, it resolves critiques of reductionism and determinism that plague realism, and critiques of ontological dualism and relativism that plague constructivism. Moreover, critical realism "clearly embodies systemic and holistic themes at its very heart, with concepts such as totality, holistic causality, emergence [...], and levels of stratification" (Mingers 2014, p28). Thus, critical realism has the potential to account for society and nature, and provide to a foundation for conceptual integration.

Towards critical realist integration of society and nature

Critical realists have argued for and proposed frameworks that conceptualize society, nature, and how they relate, but these frameworks fail to deliver on critical realism's integrative promise and explanatory potential. Most prominently, environmental sociologists have developed frameworks based on the idea that society and nature are hierarchically organized or stratified (Carolan 2005; 2005b; Carolan and Stuart 2015). Yet these attempts rely on an underdeveloped view of causality. Although they recognize that relationships between society and nature are asymmetrical, they simply assert the influence of upward and downward causality (Carolan and Stuart 2015). These statements about upward and downward causation are too vague to account for emergent processes at higher (social) levels, leading van Koppen (2017) to argue that critical realism is of limited use in environmental sociology. van Koppen (2017) argues that critical realism is inadequate because it explains social processes only through

upward causation grounded in natural sciences, without appealing to social science concepts and theories. However, this criticism is erroneous because it ignores diverse critical realist attempts to engage with concepts in sociology in ways that account for more complex causation (for example, see Elder-Vass 2010). Moreover, van Koppen's concerns are that critical realism makes social science concepts and theories secondary to and more provisional than natural science ones, rather than that this view is wrong. van Koppen's argument that social science processes must be considered within the context of natural science is not grounds for rejecting critical realism. Instead, critical realist frameworks require further development and integration to engage with social science (Stuart 2016).

These explanatory challenges are closely related to the need for integration. While critical realists have made promising first steps to conceptualize society-nature relationships, these attempts have as yet advocated for single concepts, failing to propose how those concepts relate to produce a more coherent, complex whole. For instance, critical realists have identified the need to conceptualize temporal relationships, but existing frameworks fail to show how society and nature coevolve (Carolan 2005). Rather than viewing society and nature only as ontologically stratified, ideas such as coevolution and co-constitution more completely capture temporal dynamics (Bowden 2017). Hence, theoretical integration and development are needed to link complementary concepts such as co-constitution, co-construction and coevolution.

What is needed are not only arguments that particular concepts such as complexity, emergence, coevolution, and social construction are appropriate for understanding society-nature relationships, but also theoretical syntheses that articulate how these concepts relate to advance meaningful understanding of those relationships. The challenge is to extend the conceptual apparatus of critical realism to society-nature relationships, while not jettisoning valuable insights that the social sciences have developed. At the same time, those insights might be qualified and reformulated to fit with a critical realist perspective that recognizes the possibility of a world without humans. Hence, this challenge implies a two-part project, first of critical realist integration, which then provides the integrative scaffolding upon which to develop discipline-specific concepts and theories.

This chapter pushes this integrative project further by proposing and developing the Emergent Coevolutionary Framework (ECF), an integrative lens that can be used to understand and explain society-nature relationships. The next section provides an overview of critical

realism and describes its core ontological presuppositions. These presuppositions are a preliminary set of basic concepts that are relevant to understanding society-nature relationships (i.e. historical description, interpretation, and causal explanation) (Sum and Jessop 2013).

The third section sequentially develops three main presuppositions – ontological stratification, co-constitution, and coevolution – and elaborates their implications for society-nature relationships.

The fourth section shows how these three presuppositions come together in the Emergent Coevolutionary Framework. While each of these propositions has been developed separately, my contribution is the synthesis of these ideas. I use a synthetic bricoleur's approach to assemble these disparate elements into an ordered collection that forms a refunctioned whole (Reed and Harvey 1992). This approach follows Reed and Harvey's (1992) criteria for plausibility: elements are not contradicted by empirical evidence, they are not self-contradictory, and once assembled the ontological presuppositions have internal consistency. This synthesis yields a meta-theoretical framework, a coherent and organized set of propositions about the world that can be further developed and applied to problems in specific contexts.

Finally, I demonstrate how the ECF can be used to develop discipline-specific concepts and theories by proposing how co-constructivist processes differ in settled and unsettled times. Critical realism plays an underlabouring[6] philosophical role, acting both as a sorting mechanism and to develop discipline-specific concepts and theories (Jessop 2015). Co-construction is identified as the version of constructionism most compatible with emergent coevolution. I develop co-constructivist processes, and use the distinction between settled and unsettled times to capture the contingency of causal mechanisms in light of an ontologically stratified view. This framework provides an integrative lens to understand the long-term dynamics of society-nature relationships, and can be used to explain the paradox of growth in Canadian politics.

Critical realism: a foundation for understanding society-nature relationships

Critical realism provides a compelling theory of scientific explanation that contrasts with two other major approaches: empirical realism (empiricism) and social constructionism (Jessop

[6] Critical realism interrogates the ontological, epistemological, and methodological presuppositions, as well as the substantive concepts of a discipline, providing grounds for preferring some over others. This not only helps to build up the ontological foundations of a discipline, but also to clear away internally inconsistent propositions (Jessop 2015).

2015). At one extreme, empiricism posits a directly observable empirical reality, but rejects existence of any underlying metaphysics (ontology) as unscientific because it is not directly verifiable by empirical observation (Spash 2012). Importantly, empiricists reject underlying causal mechanisms that are not directly observable (Spash 2012; Mingers 2014). According to deductive-nomological model of empiricists such as David Hume and Carl Hempel, observations of constant conjunctions (correlations) of events are made, universal laws are hypothesized, and events are explained as deducible instances of universal laws (Elder-Vass 2010). But science is not merely the recording of constant conjunctions; the deductive-nomological model does not account for the possibility of unobservable causes. Rather, as Reed and Harvey argue, scientific explanations hypothesize causal mechanisms that exist in "a stratum of reality that, while not immediately observable, nonetheless possesses the power to create experimental regularities" (1992, p356). At the other extreme, social constructionism takes ideas and social practices as constitutive of social reality, but often commits the epistemic fallacy – that reality corresponds to the knowledge we have about it. This strong version of constructivism also assumes ontological relativism: that the "real" world also depends on human perspective.

Critical realism provides an alternative philosophy to empiricism while avoiding the relativist pitfalls and extreme pluralism of strong constructivism. Critical realism asserts the primacy of ontology over epistemology. It accepts the existence of an external reality about which we can acquire knowledge, although that knowledge is itself fallible (Mingers 2014). Critical realism is realist in that the world exists even in the absence of human perception. It is critical in that we can gain knowledge about the world, but knowledge is fallible, limited and contingent. In other words, critical realism accepts the nature of being in the ontological domain, but recognizes the relativism of knowledge as socially and historically constructed.

Critical realism explains phenomena in the world by appealing to causal mechanisms. Critical realism has an explicit depth ontology that posits causal mechanisms as the underlying and often unobservable causes that must exist for the world to be intelligible. This depth ontology has three levels or nested domains (Mingers 2014). The domain of the *real* exists whether humans observe it or not. Mechanisms - fundamental laws and structures with enduring properties within the domain of the real - cause events (and cause events not to occur) in the domain of the *actual*. These actual events or their absence can then be observed in the empirical domain. In other words, critical realists focus on causal explanation to understand how real

causal mechanisms lead to actual events (or non-events) and processes, which in turn can be empirically observed or not observed. Critical realism's depth ontology replaces the highly problematic deductive-nomological model with the idea that causal mechanisms, emergent from enduring structures and processes (the real), cause events and non-events (the actual), which may be observed and experienced (the empirical) (Figure 5.1). As such, critical realism discards the universal laws of empiricism in favour of mechanisms that cause phenomena of interest, a model that better fits with scientific practice (Mingers 2014).

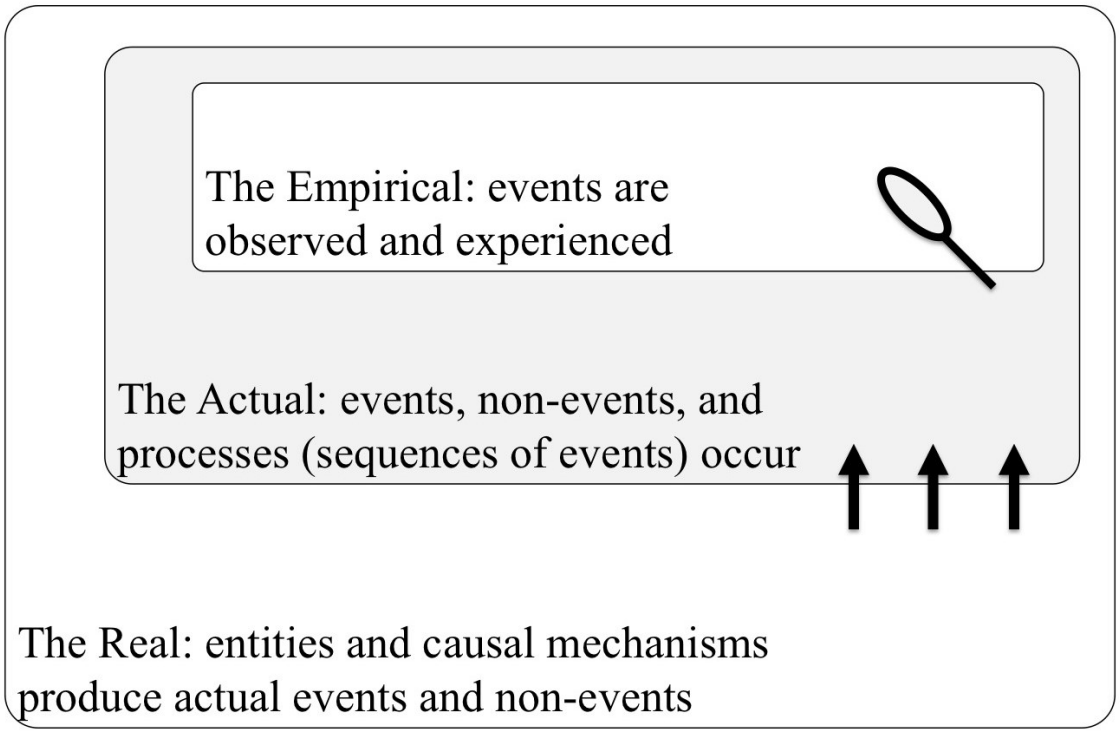

Figure 5.1. Critical realism's depth ontology
Causal mechanisms in the domain of the Real produce events and non-events in the Actual, which can then be observed in the Empirical (adapted from Mingers 2014, Fig 2.1).

Critical realism: An integrative scaffold for understanding society-nature relationships

Critical realism provides a set of core ontological presuppositions about the structure of the world, its elements, and their features.

The first and definitive feature of critical realism is its depth ontology. Critical realism's depth ontology leads to an approach to science based on explanation through causal mechanisms

(Reed and Harvey 1992). Critical realism is suited to integrating the natural and social sciences because it argues for critical naturalism in the social sciences: the same general process of science applies to both the natural and social domains, but certain ontological characteristics of the social world constrain and limit the social scientific process (Mingers 2014). Critical realism asserts that there exist intransitive (enduring) elements or objects of the social world (at least relative to the transitivity of daily life) that social sciences can study.

A second feature of the world emphasized by critical realism is ontological stratification. The world has an ordered structure as an ontological hierarchy (Spash 2012). As Wimsatt emphasizes: "*levels of organization are a deep, non-arbitrary, and extremely important feature of the ontological architecture of our natural world, and almost certainly of any world which could produce, and be inhabited or understood by, intelligent beings*" (1994, p6, emphasis in original). Higher levels of complexity emerge from and depend upon lower levels (Wimsatt 1994). These hierarchical levels of organization are qualitatively different based on their emergent properties. Biophysical and social realities are distinct, but interconnected: the social emerges from and is constrained by the biophysical (Spash 2012). In turn, society and the individual are distinct because society cannot be reduced to the aggregate of individuals (Spash 2012). Ontological stratification provides a foundational way to conceptualize how society and nature relate and their causal interactions.

Third, critical realism makes specific claims about society, nature, and their relationship. The social world, including human knowledge, is socially constructed: humans create social reality (Bhaskar 1979). At the same time, complex systems of society and nature continually interact and coevolve (Spash 2012). These concepts can be further developed to develop a more nuanced understanding about how society and nature relate.

These ontological presuppositions provide the outlines of the real world and define the structures of scientific knowledge relevant to understanding society-nature relationships. They can be integrated to provide a scaffold for knowledge-building. Once synthesized, they can be used to situate and extend theoretical perspectives to understand society-nature relationships and to explain how they evolve.

Ontological stratification: hierarchical levels of complexity and integration

One core premise of critical realism is that the world is composed of hierarchical levels of complexity that are ontologically stratified (Lidskog 2001; Carolan 2005). Higher levels of complexity emerge from and are dependent upon lower levels, such that these levels are stratified according to their increasing complexity, interdependence, and fragility. These levels of organization "cannot be taken for granted, but demand characterization and analysis" (Wimsatt 1994, p7). In particular, identifying the relevant levels of organization and the mechanisms that mediate relationships between society and nature is essential to an integrated understanding of society and nature (Reed and Harvey 1992).

The ontological stratification and emergence of society-nature relationships

Society-nature relationships are conceptualized as a hierarchy of ontologically stratified levels, where higher levels emerge from and are embedded in lower levels. The human social (cultural) world is composed of three ontologically stratified levels: shared belief systems; the social level (interdependent groups of people that relate to produce structures); and human material life (Figure 5.2). This view fits with views of culture as composed of worldviews, institutions, and technologies (Beddoe et al. 2009; Sewell 1992; Swidler 1986), but, following Norbert Elias (Loyal and Quilley 2004), organizes these categories as ontologically stratified and emergent in order to better understand their relationships.

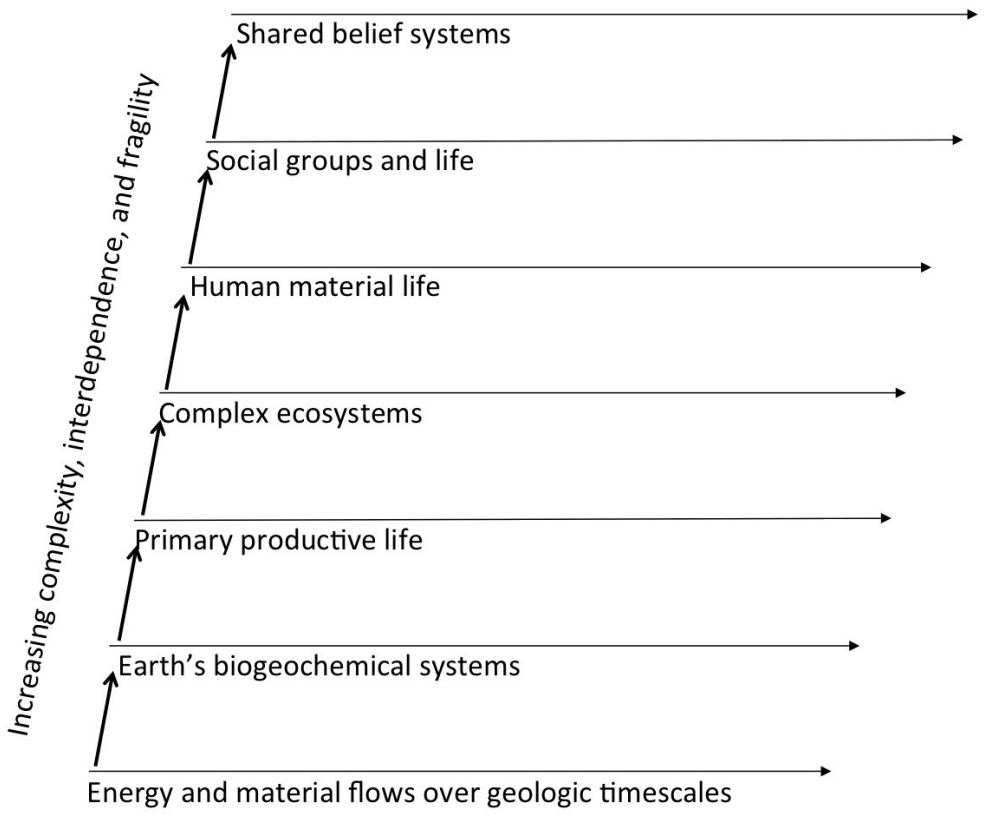

Figure 5.2. The ontologically stratified levels relevant to society-nature relationships. Bold vertical arrows indicate emergence of higher levels from lower levels, while horizontal arrows indicate individual levels, which persist and evolve over time.

The first level in the human cultural domain is that of ***belief systems***. Homer-Dixon et al. (2013) develop a complex systems approach to understanding belief systems. *Belief systems are meaning-imbued constellations of concepts that are socially shared and embedded in social-ecological systems*. Belief systems and their concepts encompass ideas, symbols, values, and semiosis, where semiosis (meaning) is often used "as a shorthand notation for the inner world of reflective consciousness, which contains a multitude of interrelated characteristics" (Capra & Luisi 2014, p304). Rather than emphasizing individual concepts, this perspective recognizes the relational nature of ideas as well as the fact that belief systems emerge from and coevolve with social, material, and ecological systems.

Belief systems are not separate, but are emergent from and dependent upon embodied and material systems. Psychology, neuroscience, and cognitive science emphasize that what makes thought meaningful is the ways neural patterns are connected to the body (Lakoff 2012). This

extends beyond the body to human embeddedness in not only social but also ecological relationships (Wheeler 2006). Cognitive concepts are not produced by the brain in isolation, but in relation to social and material realities that are re-presented and entwined in complex cognitive processes. The physical and the metaphysical are brought into contact through these social relations and material practices. In this sense, embodied practices and ways of being (ontologies) are constitutive ways of knowing. In other words, belief systems are anchored in the ontologies of the embodied humans, their social relations, and the material worlds from which they emerge.

The ***social*** is the second basic level of culture. Rather than treating human activity atomistically, the social level encompasses collective social activity and the patterns that emerge from those activities. Social groups, with their myriad relationships, interdependencies, and ways of organizing, create social entities or structures (Capra and Luisi 2014; Elias 2000). Society is socially constructed, and collectively shared meaning is an integral part of this process (Berger and Luckmann 1966). Thus, diverse ways of organizing people, social processes, and emergent structures compose the social level.

The social emerges from and is embedded in the material: "society, for all of its relational objectivity depends for its reproduction on the material activities and concrete intentions of human agents" (Reed and Harvey 1992, p369). While many sociologists recognize that the social world emerges from the material, there are different perspectives on whether social structures are primarily social, are nonmaterial but embodied (Capra and Luisi 2014), or are materially embodied in non-human resources (Sewell 1992).

The third level of the cultural domain is materiality or ***human material life***. Human material life includes the material embodiments (embodied cognition) (Lakoff 2012) of groups of people and their belief systems, material practices, and material objects (Beddoe et al. 2009). The level of human material life is often considered part of culture, although uneasily and at times only implicitly. For Beddoe et al. (2009), culture includes worldviews, institutions and technologies. But for them, technology refers not explicitly to material objects that embody cultural meaning, but "the applied information that we use to create human artifacts...as well as the institutional arrangements that we use to help us meet our goals" (2009, p2484). In contrast, for Sewell (1992) human and non-human resources are "actual" (material) embodiments or instantiations of "virtual" schemas. Texts are examples of these material embodiments. Although

materiality is a distinct level, it cannot be omitted from cultural systems and society-nature relationships. While not all materiality is cultural, materiality must be included, at least the interface of material semiosis (Jessop 2010).

In turn, emergence theories ground society in the material and energetic elements and flows that support social dimensions such as social organizations, collective identities, and modes of association (Hannigan 2006). Belief systems, social entities, and human material life that make up the cultural domain are all embedded in and dependent upon material and energetic processes in the real physical world. These levels emerge from and are embedded in lower levels, including complex ecosystems, primary productive life, and stable energy and material flows that support human material and cultural life. These levels are rooted in the ecological-evolutionary dynamics of Earth's regional and global biogeochemical systems.

Ontological stratification is materialist but not reductionist: "mind, self, and society are irrevocably grounded in the physicality of the natural world, but their substance and function are not reducible to purely material elements" (Reed and Harvey 1992, p370). In this way, it is similar to and compatible with complex systems and coevolutionary theories, while avoiding the pitfalls of reductionism.

Critical realism, ontological stratification, and causal explanation

Together, critical realism's depth ontology and ontological stratification provide a framework for causal explanations that recognizes the role of emergent properties at a variety of different levels (Elder-Vass 2010). Causal explanation is typically formulated in terms of causal mechanisms that produce a phenomenon: "A mechanism for a phenomenon consists of entities and activities organized in such a way that they are responsible for the phenomenon" (Illari and Williamson 2012, p120). Yet this general formulation does not reflect critical realism's depth ontology, which situates causal (generative) mechanisms at the level of the Real. Causal mechanisms in the Real lead to events and non-events in the Actual. In turn, events and non-events in the Actual, driven by multiple underlying causal mechanisms, produce empirically observable phenomena.

Critical realism's depth ontology distinguishes between two types of causal explanation, synchronic and diachronic, both of which are required for a proper account of causality (Mingers 2014). Synchronic causality recognizes that events and non-events are produced by underlying

mechanisms, whereas diachronic causality is the temporal process or sequence of events that lead to the phenomena in question. Causal explanation involves not only accounting for how mechanisms at lower levels of complexity give rise to events and non-events at higher levels, but also the historical sequence of events that produce the phenomenon in question (Mingers 2014). Thus, a proper critical realist account of causality involves both identifying the underlying mechanisms and their organization that produce the event or phenomena in question, and the temporal sequence of events that led to or produced the phenomena.

Ontological stratification also plays an essential role in a proper account of causation. For synchronic (upward) causation, Elder-Vass (2010) argues that it is impossible to provide a full causal explanation of an event, except as the outcome of causal interactions between that event and the whole "pyramid" of stratified levels upon which that event emerges from and is based upon. In turn, through downward causation the whole can also influence the behaviour of its parts. Elder-Vass (2010) argues that downward causation of a higher-level entity on its parts occurs over time and is therefore diachronic, whereas upward or emergent causality is a composition relationship and is therefore synchronic. Thus, diachronic causality includes both downward causation and the sequence of events that produce a phenomenon, even if those events are contained to one level without downward effects.

One important difference between synchronic and diachronic causality is that diachronic causality is contingent on synchronic causality from lower levels to create and maintain the entities or events involved in diachronic processes. Thus, at any one level, events and the phenomena they produce may be co-determined by lower- and higher-level entities and activities, but the influence of lower and higher levels is asymmetrical.

From ontological stratification to co-constitution

Co-constitution provides a complementary way of understanding society-nature relationships. If ontological stratification provides an important first approximation of how society and nature relate, it captures neither the intricacies of the cultural strata nor the complexities of society-nature relationships. The degree of complexity influences ontological stratification and causality. Wimsatt (1994) identifies at least four general degrees of complexity in order of increasing complexity (Table 5.1). The first degree of complexity is simple hierarchical levels of emergence and causality. An example is the configuration of atoms into

molecules, with no significant change in those atoms. Second, hierarchical levels of emergence have two-way causality. Examples include the organization of molecules in cells, which may change the configurations of those molecules; and the relationships between cells and organs. Third, fuzzy levels have complex, recursive feedbacks and causality. With increasing complexity the distinctions between levels may break down (Wimsatt 1994). These distinctions become "fuzzy" because different levels recursively interact, producing additional dynamics and feedbacks. This degree of complexity reflects the relationships between organisms and species, as well as species and ecosystems. Fourth, levels are indistinguishable, co-constituted, co-constructed and co-evolving, with complex causality and emergent processes.

Table 5.1. Ontological stratification, degree of complexity, and causality

Degree of complexity	Levels and causality
Simple hierarchy	Levels of emergence and upward causality
Interacting levels	Two-way causality: lower levels constrain higher levels while higher levels entrain lower levels
Fuzzy levels	Multiple interacting levels of causality produce complex, recursive feedbacks
Indistinguishable levels	Upward, downward, and historical causality produce complex, recursive feedbacks and emergent processes

Without jettisoning the important causal implications of ontological stratification, society-nature relationships can further be conceptualized as co-constituted, with higher levels indistinguishable and conceived as entwined in multi-dimensional assemblages with complex causality. Wimsatt's fourth degree of complexity reflects social systems whereby belief systems, social, and material dimensions are never distinct, but are entwined. Indeed, Lidskog proposes that the distinction between the social and the natural worlds is that in the natural world levels are hierarchically ordered, whereas this hierarchical distinction between levels is not clear in the social world (Lidskog 2001). Hence, at least the three proposed levels of the cultural domain – belief systems, the social, and human material life – can be more accurately conceptualized, not as distinct and hierarchical levels, but as different dimensions.

On one hand, semiosis is not separate from, but is an inherent and definitive characteristic of the social world. Cultural systems are inherently meaningful and symbolic such that meaning or semiosis is a definitive element of cultural systems (Capra and Luisi 2014). Semiosis is a fundamental link between the cognitive and social dimensions of human life because "our inner

world of concepts and ideas, images, and symbols is a critical dimension of social reality" (Capra & Luisi 2014, p304). Belief systems cannot be separated from their social context because society is the gestalt of many interdependent, meaningful roles and the dynamics that emerge from those relationships among people and groups of people. The roles and the identities attached to each role provide meaning and belonging to people who adopt that role, and to society as a whole. Indeed, belief systems "go all the way down" and are integral to all social objects (Bernstein 2001, p183). Thus, belief systems are deeply integrated into the interdependent roles of a society. Moreover, ideas are fundamental to causation in social systems (Blyth 2011). Berger and Luckmann argue that belief systems are not simply determined by the social relations of society. Rather, "the relationship between knowledge and its social base is a dialectical one, that is, knowledge is a social product *and* knowledge is a factor in social change" (1966, p87, emphasis in original). Hence, the semiotic and the social are intimately entwined.

On the other hand, although some argue that the symbolic dimension distinguishes social from natural systems (Westley et al. 2002), semiosis is not unique to human social systems. The materialization of ideas captures how belief systems and their meaning are woven into human material life, as well as lower levels (Gopel 2016). In addition to embodied cognition and distributed (social) cognition, we often store knowledge in the external world (i.e. written down on paper) rather than internally (Risko and Dunn 2015). The materialization of ideas can take many forms, from inscriptions such as writing, art, film and other means of recording, to material artefacts, buildings, and other physical structures and relationships (Capra and Luisi 2014). One prominent example of the materialization of ideas is the capacity of humans to externalize their logic and ideas in technology (Westley et al. 2002). In other words, belief systems are not only integral to social practices, but also become embedded in physical form through human interactions with the material world. Comparing fossil-fuel intensive monoculture versus permaculture illustrates the difference between a high versus low degree to which human belief systems are embedded in and interfere with non-human ontologies, although human and non-human ontologies are entwined in either case. Communicative materialism further blurs distinctions between the semiotic, social, and material, with language not only being meaningful, but also both a social and material practice (Fuchs 2017). While the three levels of cultural systems can be identified, they are not separate but co-constituted and entwined.

However, a sharp distinction between social and natural systems based on semiosis is unwarranted because meaning or semiosis is not exclusive to human social systems. New materialists and the new ontology perspective argue that semiosis is inherent in non-human nature (Gopel 2016; Cool and Frost 2010). This emerging perspective of material semiosis suggests a role for non-human nature in society-nature relationships.

The levels implicated in society-nature relationships may also be so highly integrated and entwined as to be fuzzy or indistinguishable. At the level of complexity of society-nature relationships, entities are co-constituted, with varying degrees and compositions of semiotic, social, and material forms that come together in different ways. Shared ideologies tend to be constituted largely by belief systems shared by distinct social groups (Homer-Dixon et al. 2013); written texts are be largely produced through the intersection of belief systems and the material (Gopel 2016); and infrastructure tends to be constituted more by collective social activity and materials (Hornborg 2017). Yet in each of these examples all three dimensions are present.

Emergent coevolution

Society-nature relationships can be understood as coevolutionary as well as ontologically stratified and co-constituted. Coevolution is the process by which at least two systems "causally influence the evolution of each other" (Norgaard and Kallis 2011, p289). As John Bellamy Foster argues, "a comprehensive sociology of the environment must by definition be co-evolutionary in perspective, taking into account changes in both society and nature and their mutual interaction" (1999, p398). Language and consciousness coevolved with and are inextricably connected to the evolution of environments, technology and organized social relations (Capra and Luisi 2014). Loyal and Quilley describe how "symbol emancipation created a positive feedback loop in human evolution towards integration and complexity through culture and social processes. But culture also intervenes in developmental biology through the "wiring up" of people" (2004, p51). Hence, society-nature relationships are not merely hierarchical and emergent, but also coevolve.

The coevolution of society and nature involves interactions between human (semiotic, social, and material) and non-human biophysical systems (Norgaard and Kallis 2011). In other words, coevolutionary theory suggests that knowledge and values, technologies and institutions, change together, all the while coevolving with their environments. Coevolution is a useful

concept because it avoids either-or debates about environmental versus cultural causation. Instead, coevolution alludes to more complex relationships between the material, the social, and the semiotic that are missed by a strictly hierarchical perspective. There are multi-level interactions and dynamic feedbacks between belief systems, individuals, society and the material world (see Homer-Dixon et al. 2013). For instance, in social systems actions taken in light of beliefs about the system may alter the system itself (Blyth 2011). Karl Marx's critique of capitalism and his theory of revolutions has transformed the political systems in many countries, and shaped the course of modern history.

While critical realism rejects biological and cultural reductionism, coevolution is consistent with its stratified view of reality (Carolan 2005b). Rather than opposing frameworks, I argue that an ontologically stratified understanding of the world undergirds a coevolutionary view. For example Mitleton-Kelly and Davy conceive the coevolution of society-nature relationships as "three embedded systems: the biophysical, the biotic and the cultural, all of which evolve inter-connectedly and inter-dependently" (2013, p52). Combining emergent and coevolutionary lenses gives rise to a more nuanced understanding of society-nature relationships:

> each level must be composed of specific entities whose powers and mode of reproduction are unique to that level. These internally distinct and autonomous levels are, in turn, dialectically integrated into a loose-knit system of emergent processes. Each level, its entities and their reproductive activities, form the reproductive ground for the next higher strata. The latter, more inclusive stratum, however, is so constructed that it cannot be reduced to more fundamental layers. Once formed, moreover, each level feeds back upon the layer or layers from which it originates and delimits the conditions under which these layers thenceforth operate. Such ontological layerings and their dialectical interactions produce a nested reality that is composed of layered entities. Moreover, these reciprocal determinations give the hierarchies an overall irreducible complexity (Reed and Harvey 1992, p358).

Thus, society-nature relationships can be understood simultaneously as emergent and coevolutionary.

The Emergent Coevolutionary Framework: a lens to examine society-nature relationships

Integrating ontological stratification and coevolution provides a way to conceptualize how society and nature come together and relate over time. Building on the idea of emergent coevolution, I propose that society-nature relationships have three macro-dynamics.

First, society and nature are ontologically stratified, with higher levels of complexity emerging from and dependent upon lower levels (Figure 5.3.1). The social stratum is composed of belief systems, social groups, and materiality. These levels are dependent upon and emerge from strata of non-human nature through upward causation. The relationship of lower levels to higher levels can be understood as ***enabling/exhaustion*** and ***contingency***. ***Enabling*** describes the often invisible foundational role of natural systems that make social reality possible through emergence and upwards causality. In contrast, ***exhaustion*** describes the process by which a system or feature undermines or fails to maintain the conditions that allow it to persist (Streeck and Thelen 2005). ***Contingency*** refers to the asymmetric dependence of higher levels on lower levels and the causal contingency that results. The stability and persistence of higher levels, including mechanisms at those higher levels, are contingent upon lower levels from which they emerge. Thus, higher level entities and processes including downward and historical causation (i.e. social processes) are contingent upon lower levels (i.e. energy and material flows).

Second, the complexity of society-nature relationships means that the relevant levels are not distinct, but entwined. The qualitatively different levels of society-nature relationships co-constitute and produce multi-dimensional assemblages. This relationship is not only determined by human agency, but also by the non-human world through its characteristics and dynamics. Higher levels may be ***embedded*** in lower levels through downward causation such as the materialization of ideas (Figure 5.3.2). However, the characteristics of lower levels shape and ***constrain*** how higher entities (i.e. ideas) are embedded and whether they persist. This perspective emphasizes that the roles of both human and non-human nature are different and asymmetric.

Third, considered as an ongoing historical process, these stratified but entwined levels coevolve. Coevolution means that society and nature continually influence one another over time. The evolving relationship between society and nature is always semiotic and social, but also material and reflects those material conditions. Over time, embedded ways of being (ontologies) ***echo back*** (Figure 5.3.3). People encounter these embedded ontologies as part of

their objective reality, a meaningful-social-material whole including society-nature relationships. These embedded ontologies may be experienced and internalized as "the way things are." These recursive – dialectical – interactions produce complex and contingent causal relationships that involve mechanisms and processes at multiple levels.

Thus, society-nature relationships can be conceptualized as three dynamic moments of emergent coevolution (Figure 5.3): (1) the stratified emergence of higher levels from lower levels through upward causation, (2) the embedding of higher levels such as belief systems in lower levels through downward causation, and (3) the complex temporal processes of coevolution that result. This framework provides a lens to examine how society-nature relationships coevolve over time.

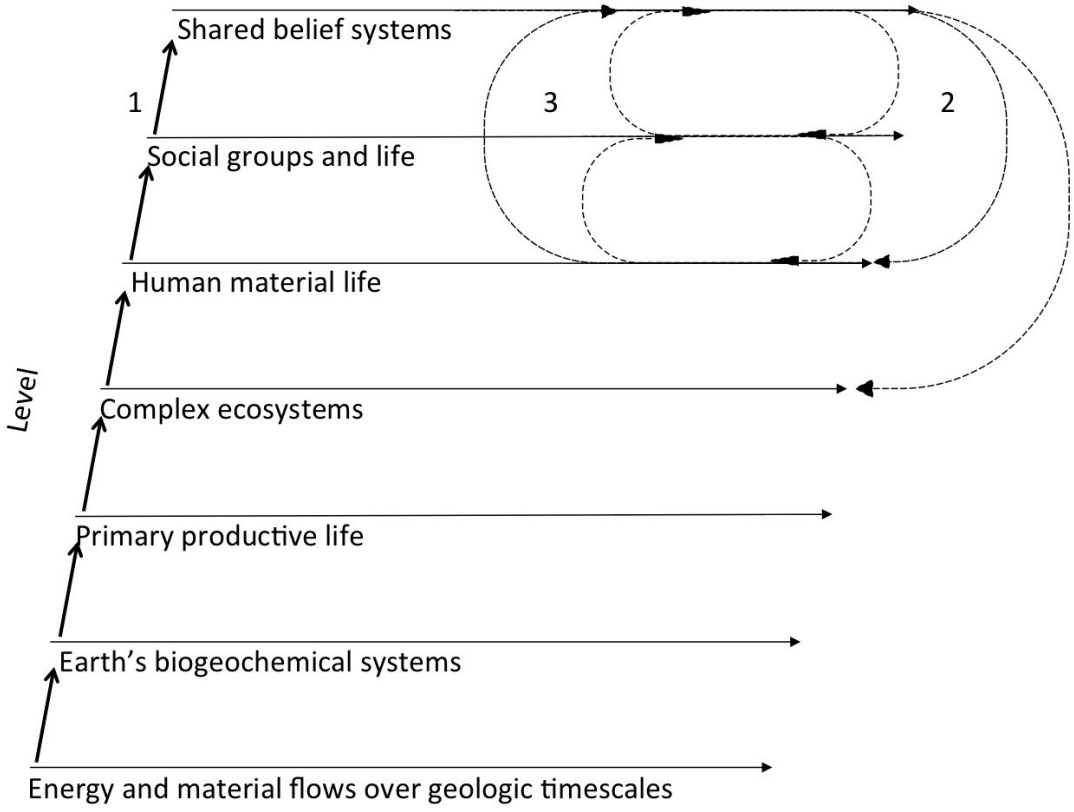

Figure 5.3. Three dynamic moments of emergent coevolution
(1) higher levels emerge from lower levels; (2) higher levels are embedded in lower levels; and (3) society (ideational-social-material assemblages of the top three levels) and nature (lower levels) coevolve through complex temporal processes. Solid vertical arrows indicate synchronic (upward) causation, while curved dashed arrows indicate diachronic (downward and temporally sequential) causation, which is contingent.

Applying the ECF to develop discipline-specific concepts and theories: the case of co-construction

This section demonstrates how the Emergent Coevolutionary Framework (ECF) can be used to develop discipline-specific concepts and theories to understand society-nature relationships and explain their causation. Building upon emergent coevolution, I develop co-construction, a version of social construction, to conceptualize the long-term processes and dynamics of society-nature relationships on a societal scale. First, I evaluate variants of social construction, showing that co-construction is the variant that best enables integrative understanding of society-nature relationships. Next, I re-interpret constructivist concepts and processes through a co-constructivist lens and develop them, focusing on five long-term processes of society-nature relationships on a societal scale. Finally, I explore the implications of the ECF for how these processes come together and relate during periods of stability and change.

Social construction and the society-nature relationship

Social construction (or constructionism) is a process-based theory that can help conceptualize the coevolving relationships between and the historical dynamics of belief systems, society, and the material world (Berger and Luckmann 1966). Its defining characteristic is epistemic relativism, the idea that human knowledge cannot be divorced from social and historical experience (Jones 2002). Social reality is socially constructed. That is, social reality is produced, perpetuated, and may be changed by humans and their collective interactions. This takes the form of an ongoing dialectic process between social reality and the individuals that produce that reality. Hence, ideas and meaning (semiosis) are fundamental to both human action and causation in social systems (Blyth 2011).

Critical realism explicitly recognizes that social reality, including human knowledge, is socially constructed, but in a specific way that allows for both materiality and history (Mingers 2014; Spash 2012; Reed and Harvey 1992). For Bhaskar, social construction is historically bracketed and coevolutionary: "individuals do not manufacture social reality out of unalloyed desire. There is always an obdurate, prior reality, i.e., a set of objects (natural or otherwise), social relations, and institutionalized motivations, that objectively constitute society and bracket all constructive acts" (Reed and Harvey 1992, p369). This view of constructivism recognizes the material foundations of society: "society, for all of its relational objectivity depends for its

reproduction on the material activities and concrete intentions of human agents" (Reed and Harvey 1992, p369).

There are three versions of constructivism that are more or less compatible with critical realism and with different understandings of the society-nature relationship: strong constructivism, weak constructivism, and co-construction.

Strong constructivism

Strong constructivism holds to both epistemic and ontological relativism, and is often associated with post-structuralism and post-modernism. Ontological relativists claim, "the actual conditions of reality are determined by and [are] relative to the ideas and wishes of the observer" (Jones 2002, p248). In other words, no objective reality exists in the absence of the observer. They hold that no knowledge claims can be privileged over others, even those of science. This position rejects that human knowledge can be linked with an external reality and thus is unsuited to research whose object is the non-human environment (Jones 2002). Strong constructionism is unsuited to addressing environmental problems because it assumes that reality does not exist "out there" in the absence of humans; according to strong constructionism, changes in discourse or knowledge would lead to changes in physical reality. In rejecting an objective non-human reality, strong constructivism is incompatible with critical realism and is unhelpful for understanding and addressing environmental problems.

Weak constructionism

In contrast, the weak constructionism developed by Berger and Luckmann (1966) adheres to epistemic relativism, but ontological realism. While human knowledge is social, historically contingent, and cannot directly access an objective external reality, the natural world exists even in the absence of human perception (Jones 2002). Weak constructionism recognizes that the material conditions of human existence and the symbolic dimension of meaning and cognition are not mutually exclusive. Thus, weak constructivism is at least compatible with environmental problems.

While weak constructionism may be compatible with the existence of a material world in the absence of humans, it does not explicitly theorize the natural world or society-nature relationships. This lacuna is important because a truly environmental sociology needs to

recognize the biophysical as well as social influences in society-nature relationships (Murdoch 2001). Along these lines, Spash (2012) argues that we need an approach that neither reduces social life to its biological constraints, nor denies those biological constraints on social life. What is absent is explicit attention to the interplay between the biophysical and the social (Rice 2013). Similarly, Foster rejects strong constructionism and points to "cautious constructionism" as a potential basis for environmental sociology, but emphasizes the need to explicitly recognize the complex metabolic foundations of society (1999, p401). From the other direction, some social constructivists recognize that "reason and knowledge are not detached and disinterested, but historically conditioned and materially embodied forms of practical engagement with the world" (Weinberg 2009, p290). The challenge is to develop a version of social construction that is not only compatible with ontological realism, but explicitly theorizes the roles of materiality and non-human nature in society-nature relationships (Mingers 2014; Parker 2014).

Co-construction

A third version of social construction that has emerged in environmental sociology is co-construction. Similar to weak constructionism, co-construction recognizes epistemic relativism and ontological realism. But while weak constructionism is too timid on environmental issues, co-construction explicitly recognizes the presence and role of nonhuman nature (Rice 2013, p240). Co-construction builds upon social constructivist insights, but recognizes that society and nature are "actively-generated co-constructions" (Irwin 2001, p178). This perspective builds upon the idea that social reality has material bases even as nature is never devoid of social influence: "the biophysical-material and the social are intertwined such that the social constructs what is construed as the natural even as biophysical properties, processes, and reactions are deeply implicated in what construed as the purely social" (Rice 2013, p246). Co-construction acknowledges key constructivist insights: semiosis as a defining cultural characteristic, and the constructed, dialectic nature of cultural systems. In this way, co-construction is coevolutionary: society and nature are mutually influenced by each other. Among the three constructivist alternatives, only co-constructivism explicitly theorizes the material foundations of society and the role of non-human nature.

Co-constructive concepts and processes by which society and nature relate

In this sub-section, I describe the core concepts of co-constructivism by which society and nature relate. I then re-interpret constructivist processes through a co-constructivist lens and develop them, focusing on five long-term processes of society-nature relationships on a societal scale.

Co-construction: specific concepts that connect society and nature

Co-constructivists have developed specific concepts to understand how society and nature relate:

1. Co-constitution: Society and nature are entwined in multi-dimensional assemblages that coevolve (Bowden 2017; Rice 2013).
2. Performativity: Strong constructivism over-estimates *human* construction and agency, presuming that the non-human world is passive and plastic in the face of human agency (Coole and Frost 2010). However, non-human nature is not passive or entirely controllable (Rice 2013). In contrast, co-construction recognizes non-human performativity, which refers to "the properties, processes, and reactions of the biophysical-material quite irrespective of social representation and definition but also enhanced through anthropogenic engagement" (Rice 2013, p248). In this way, co-construction recognizes the distinct role of non-human nature, while not ascribing (human-like) agency to non-human entities.
3. Decentered asymmetry: Co-constructivists adopt an ontological posture that is asymmetrical but not dualist (Rice 2013). Asymmetry means that, although both humans and non-human nature play important roles, there are "stable and distinct differences" between humans and non-humans (Murdoch 2001, p128). Decentered asymmetry recognizes nature's objective characteristics, which may not be expressed or represented by humans. As a result of this asymmetric, coevolving relationship the biophysical-material, including that instantiated in technology, continually "echoes back" to influence humans (Rice 2013, p249).
4. Complex causation: Causation is complex and coevolutionary because society and nature are "inextricably entwined in a complex, evolving socio-natural assemblage" (Bowden 2017, p50). But causation is also asymmetric. Ontological stratification, and co-

constitution mean that different ontological levels can have different weightings of causality (Tilzey 2018), and that causal mechanisms at higher levels are contingent upon lower levels.

These concepts are compatible with the understanding of society-nature relationships proposed in the ECF, and provide a foundation to understand co-constructive processes by which society and nature relate.

Processes of co-construction by which society and nature relate

Within the meta-theoretical framework of the Emergent Coevolutionary Framework, and building on co-constructivist concepts, I reinterpret social constructivist processes and develop them to articulate co-constructivist processes. I propose five co-constructivist processes that encompass how society and nature relate: multi-dimensional embedding, sedimentation, layering, entrenchment, and reproduction.

1. Multi-dimensional embedding

Processes of embedding are how disembedded concepts become established in society-nature relationships[7]. Social constructivism provides concepts that are useful to understand embedding, but not the full extent of its multi-dimensional nature. Social constructivists are concerned with how ideas become social reality and how that reality persists. For constructivists, new elements are established and reproduced through two processes: habituation and institutionalization. Through habituation, individuals automate decisions and actions. The origins of such decisions and actions are apparent to those who have developed those habits. Through institutionalization, elements are socially constructed and reproduced. For social constructivists, social systems and their features are established and reproduced through the ongoing dialectic of social construction. There are three steps or dialectical moments in the ongoing interaction between society and the people that produce and reproduce social reality (Berger and Luckmann 1966): externalization, objectification, and internalization. These three steps correspond to three intertwined features of social reality: society is a human product, society is an objective reality,

[7] Although one could argue that abstract human concepts are never disembodied, concepts can be usefully thought of as relatively disembedded. Whether creative, social, or natural, the origins of human inspiration for disembodied concepts need not preoccupy us here.

and humans are social products. Externalization occurs when shared strategies and actions become common sense and produced (externalized) by groups of people as institutions. In this way, society is a human product. Objectification occurs because individuals do not exist in the absence of societies and their institutions. All humans are born into societies and the institutions that confront them as an objective external social reality. Individuals internalize this objective social reality as "the way things are" and "the way things are done." Hence, humans are social products. Thus, for social constructivists, human agents produce and reproduce the institutions and social stability that they take for granted. These two processes, habituation and institutionalization, provide a foundation to understand how elements are embedded in the individual cognition and social levels respectively.

Yet these processes do not capture the full extent of embedding because social constructivists are unclear on materiality. Material semiosis and associated material processes are rarely considered by constructivists, even though constructivists typically consider culture as coterminous with semiosis (Blyth 2011; Capra and Luisi 2014). Notably, in his definition of culture, Bourdieu includes *all semiotic systems* "ranging from language as a communicative network, through science to art and literature; all instances of a symbolic universe" (Jenks 1993, p12-13). This interpretation suggests that material semiotics of the human material level should be included in such analyses (Jessop 2013; 2015). These material influences include the materialization of ideas (Gopel 2016), the development of technologies (Beddoe et al. 2009), and the material and energetic transformations of the non-human natural world.

Co-construction provides an alternative, materialist view of how elements become established and embedded in society-nature relationships. According to this alternative view, elements are embedded along multiple dimensions, with the human role conceived as embedding human belief systems in multi-dimensional assemblages, as well as in lower levels through downward causation. Elements are embedded in at least three ways along three respective dimensions: individual cognition, social, and material (Figure 4).

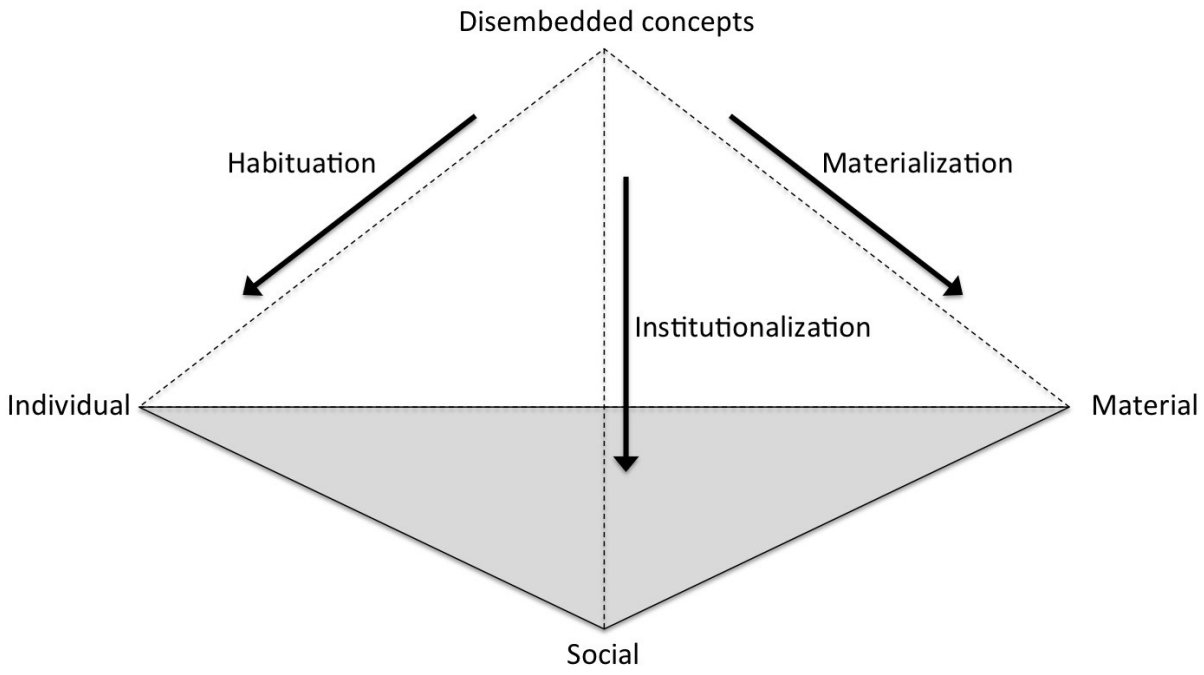

Figure 5.4. Processes of multi-dimensional embedding along individual, social, and material dimensions

Along the dimension of individual embodied cognition, ***habituation*** is a relatively individual process that moves from explicit, effortful and resource-intensive rational cognition towards more durable human embodiment through learning and automation (Berger and Luckmann 1966).

Along the social dimension, elements are socially constructed through ***institutionalization***. Institutionalization includes justification and consent, while de-institutionalization encompasses the reverse processes (Orr et al. 2016). ***Justification*** is the process of providing reasons for why something is legitimate, whereas ***contestation*** entails disagreement meant to de-legitimate something. Elements may become de-politicized as they are externalized and take on an objective social reality. Once institutionalized, an element "almost by definition works to refute its own specificity and historicity: it is only fully effective, arguably, to the extent that it can pass itself off as promoting trans-historical 'common sense'" (Gilbert 2013, p12). When an element is considered common sense it fades into the background; it has become institutionalized to the point that a society no longer thinks to contest it. Conversely, elements that are taken for granted can also be politicized and contested once again (Jessop 2010). In addition, intersubjective meaningful practices demonstrate ***consent***, or

withdraw of consent (Orr et al. 2016). Consent contributes to legitimacy by signifying general agreement or consensus, and can be established and maintained or withdrawn. All the while, processes of reality maintenance act to perpetuate the internalized reality through the embodied routines in everyday life (Berger and Lucknamm 1966). These routines are continuously reaffirmed through interactions with others. In this way, institutionalization is a distinctly social process, but reinforced by and entwined with individual habituation.

Along the material dimension, processes include materialization and de-materialization. ***Materialization*** refers to human transformations of the material world that impose human order and meaning (ontological change) on both the human and non-human world. Examples include the materialization of ideas in the form of symbols, texts, materialized communications, art, technologies, buildings and infrastructure, and material and energetic transformations of the non-human world (Gopel 2016; Jessop 2010). In contrast, ***de-materialization*** is the erosion, removal, or replacement of materialized ideas in the form of human order and semiosis. Examples include human projects such as de-industrialization, de-materialization, and de-carbonization, but also ecological restoration and rewilding.

These processes of embedding are neither unidirectional – as indicated by opposing processes – nor entirely separate. All co-constructivist embedding involves different combinations of these ideal-type processes, and these phenomena cannot exist or persist without at least some degree of each. Along these lines, Jessop emphasizes: "every field is always already semiotic and also socially structured, each has its own mix of semiotic and extra-semiotic mechanisms" (Jessop 2010, p342). Without ongoing embodied human interaction the full cultural meaning of artefacts is lost. Without materialization through material and energetic traces, at least through metabolic support for embodied and social interactions, cultures cannot exist. And individuals and their material worlds are disparate and developmentally dysfunctional without social interaction and shared meaning to hold them together.

2. Sedimentation

Sedimentation provides a way to conceptualize how features are progressively embedded in society-nature relationships, and in the process interact with the stratified levels of reality. Sedimentation captures the observed tendency of features to progress from narrowly held, contested, and fleeting towards becoming increasingly pervasive and durable. If a feature is

sedimented, this refers to the historical continuity of an element or feature and its survival across generations (Fuenfschilling & Truffer 2014). Sedimented features "are thus most likely to be stable, hard to deinstitutionalize and change" Fuenfschilling & Truffer 2014, p775). As a result of sedimentation, a feature takes on the form of an objective fact of life. The essence of sedimentation is the progression from fleeting and contested to pervasive and durable, along with acceptance of sedimented features as the way things are.

Social constructivism fails to adequately explain the sedimentation process. Tolbert and Zucker (1999) propose that sedimentation is the third of three stages in the process of institutionalization: habituation, objectification, and sedimentation. They equate sedimentation with exteriority under the assumption that increasing spread and prevalence leads to durability (Tolbert and Zucker 1999). In addition, sedimented features are "experienced as possessing a reality of their own" that "confronts the individual as an external coercive fact" (Tolbert and Zucker 1999, p175). From this perspective, sedimentation is "all forms of routinization that lead, inter alia, to forgetting the contested origins of discourses, practices, processes, and structures" (Jessop 2010, p340). Moreover, sedimentation seems to encompass not only prevalence through externalization and objectification, but also perpetuation over time. Indeed, Tolbert and Zucker later characterize sedimentation as "both by the virtually complete spread of structures across the group of actors theorized as appropriate adopters, and by the perpetuation of structures over a lengthy period of time" (1999, p178). Sedimentation seems to amount to the accumulative process that encompasses habituation and institutionalization, with the properties of prevalence and durability.

This view of sedimentation misses both materiality and the fact that sedimentation is multi-dimensional. For Berger and Luckmann (1966), language is the main depository of sedimentations, but they recognize that it is possible with any other sign system (i.e. including material semiosis). If sedimentation can be individual as well as social, it can also be material. Moreover, constructivists fail to capture the multi-dimensional dynamics whereby belief systems, social, and material dimensions are co-constituted and entwined in society-nature relationships. For instance, habituation is treated as relatively unstable and impermanent (Fuenfshilling and Truffer 2014). However, habit formation is a process of embodied learning and automation that can be enduring and persistent. There is no reason why habit formation necessarily precedes objectification; the two likely occur in tandem. Thus, rather than being

temporally sequential, objectification differs from habit formation because objectification is of a different – socially constructed rather than individual embodied – nature.

Building on the idea of multi-dimensional embedding, a co-constructivist reading of sedimentation addresses these conceptual difficulties and provides a clearer way to understand sedimentation as a progression. From a co-constructivist perspective, sedimentation is not merely the settling down of discourse and the spread of a structure among many people (Fuenfschilling and Truffer 2014); it also has a material dimension in the form of embodiment, communicative materialism, and the materialization of ideas. Moreover, emergent coevolution reflects a duality whereby multiple entwined dimensions at the same time retain causal characteristics of stratified and emergent levels. For instance, shared belief systems are contingent upon and cease to exist in the absence of human and material embodiments. Accordingly, sedimentation can be thought of as the process by which a feature becomes increasingly embedded in and pervasive throughout different stratified levels, including belief systems, the social, and material (Figure 5). Thus, sedimentation captures a general progression from elements embedded primarily in higher levels such as belief systems towards embedding in deeper levels.

Sedimentation provides a geological metaphor for how elements become increasingly durable. The specific ontological characteristics of each level suggest a general tendency of elements to become progressively embedded, at first primarily in the relatively superficial, fleeting, ideologically contested level of belief systems through habituation; next through increasing institutionalization (justification and consent) at the social level; and then increasingly materialized at the human material and non-human material and energetic levels. As elements "sediment down" into deeper levels, they become more pervasive, but also more durable and persistent.

The underlying characteristics of each stratified level shape how elements are embedded and endure. For social constructivists, the social world is constructed, relatively transitive, and contingent. Shared ideas provide the basis of contingent stability that is socially constructed (Blyth 2011). In other words, "humans create the stability that they take for granted" (Blyth 2011, p96). Indeed, to the degree that social entities and structures are socially constructed as the product of abstract mental images of human consciousness, social structures do not endure in time in the same way material (i.e. externalized human or non-human) ones do (Reed and Harvey 1992). In contrast, the materialization of ideas through technology and other changes in

the material world amplifies and makes meaning more durable (Fuchs 2017). A society's technology, infrastructure, books, artifacts and ways of sustaining itself on the Earth are more enduring and influence both society and nature in different ways than social structures. As a result of the distinct characteristics of these different dimensions, deeper elements are more durable and persistent. It is easier to change one's mind than social institutions, practices, and identities. In turn, social changes may be less energetically and materially costly than changes to material practices, technologies, objects, and society's relationships with nature.

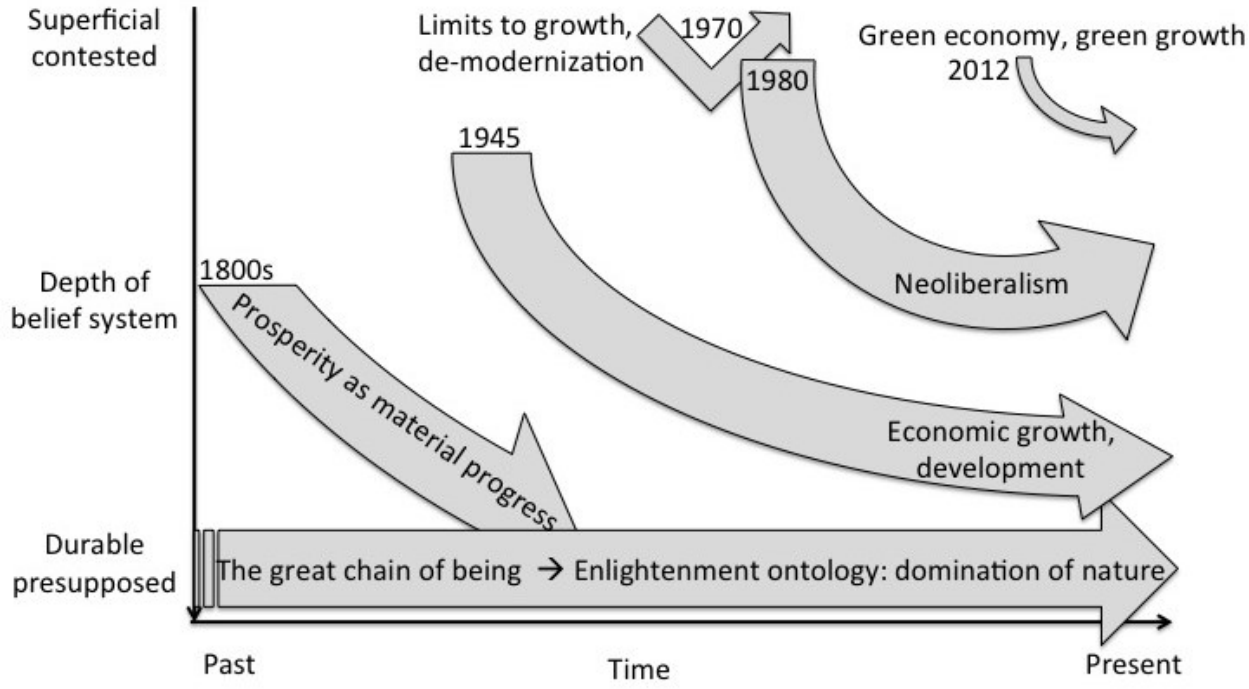

Figure 5.5. The sedimentation and layering of elements multi-dimensional depth over time. Elements at the top are relatively superficial and fleeting, while lower elements are more persistent and durable. Sedimentation is represented by the progression of individual arrows from fleeting and superficial levels to increasingly deeper levels through multi-dimensional embedding. Layering is represented by the historical relationship between new elements (top arrows) and established layers (lower arrows) whereby established layers select for and constrain the entry of new elements. The Great Chain of Being was the predominant view that the world was organized as a descending scale of good towards evil, and grounded Enlightenment ideas of human domination of nature (Lovejoy 1964).

3. Layering

Society-nature relationships can be viewed from a temporal perspective, as the layering of new features on established ones. Layering follows directly from sedimentation, providing a metaphor for how elements are established and interact with one another in successive layers as elements sediment down over time. New elements are not established in isolation, but encounter and may be integrated into the existing system, which is being reproduced. As new elements are introduced, established layers ***constrain*** the entry of new elements, acting as a selection mechanism, while new layers ***presuppose*** established layers and are laid down upon them (Bernstein 2001) (Figure 5). As a result, the success and persistence of new elements are determined or constrained by established layers. In turn, new elements presuppose established layers and their ways of being, stabilizing established layers and contributing to their durability. The result is the establishment of new elements upon older ones, and the progressive layering of over time.

Social constructivists explain the selection process by which established layers constrain entry of new elements in terms of legitimacy and social fitness. Existing social structures constrain the entry and institutionalization of new ideas because new ideas need to find "fitness" with existing layers (Bernstein 2001). For instance, Bernstein (2001) showed how the underlying social structure of state identities and international political economy resulted in the compromise of liberal environmentalism, a form of environmentalism compatible with deeper layers, including the emerging neoliberal consensus.

From a co-constructivist perspective, new elements and established layers are both multi-dimensional assemblages. They not only have ideational and social (i.e. structural) dimensions, but also material ones. New elements are not only selected according to their ideational and social fitness in relation to existing layers, but also through their material fit in terms of material compatibilities and possibilities made available by existing layers. The level-specific processes of multi-dimensional embedding act in tandem to determine success of new features. Ideas are justified and contested; social strategies are legitimated and de-legitimated through demonstration and consent; and practices and approaches are either compatible with or are supported by material and energetic factors or fail to persist. Hence, Bernstein's (2001) socio-evolutionary process becomes a coevolutionary one that recognizes materiality.

4. Entrenchment

An element or feature can also become entrenched. In order for a feature to become entrenched, its reoccurrence must be linked over time through causal feedback (Wimsatt 2013). Through such feedbacks, a feature can become entrenched in a system to varying degrees: a feature may become self-reinforcing through simple entrenchment, self-producing through generative entrenchment, or even system-sustaining through generative entrenchment. Simple entrenchment means that the downstream consequences of a feature (or element) must feed back to maintain the presence of the feature that is entrenched (Wimsatt 2013). The feature persists at least in part due to this feedback. Generative entrenchment means a feature is deeply embedded and has become a causal element of the system (Wimsatt 1994). A feature is generatively entrenched if its downstream consequences lead to its reproduction, or to the reproduction of the system. Maintenance entrenchment refers to features that lead to the reproduction of "system metabolic functions" without relying on recurrence of successive life cycles (Wimsatt 2013). Once a feature had become this deeply entrenched, dynamic, self-sustaining feedbacks lead to the persistence of the system over time (Tavory et al. 2013).

5. Reproduction

Elements and the systems in which they are embedded are continually reproduced. For social constructivists, externalization, objectification, and internalization are three ongoing moments between society and individuals that produce and reproduce social reality (Berger and Luckmann 1966). However, these moments do not simply involve disembodied ideas that are socially reproduced, but rather a coevolutionary process of co-creation by embodied humans and their environments through social and material practices that access, engage with, and are also made possible through non-human nature and processes. As such, these three moments can be re-interpreted to include materiality as the ongoing co-creation of a shared reality and society-nature relationship by both humans and non-human nature. The social constructive dialect becomes three moments in a material dialectic of co-construction:

- ***Externalization*** is the embedding of meaning into the social and material worlds through the materialization of ideas (i.e. technology), social structures (i.e. identities, roles, organizations), and individual embodied humans (i.e. habits). Culture and its society-nature relationships are co-constructed.

- ***Objectification*** involves viewing those ideational-social-material assemblages as "the way things are." Cultural assemblages and society-nature relationships are an objective reality.
- ***Internalization*** describes how people internalize and are socialized into culture, including its accumulated elements, features, and society-nature relationships. These are the ontological structures, forms, and meanings embedded in the co-constituted and co-constructed ideational-social-material world. Embedded features "echo back" and may be internalized as "the way things are."

These are moments in a coevolving, multi-level, historically layered cultural system.

Together, these co-constructivist processes present a holistic picture of how elements become established and reproduced through multi-dimensional embedding, sedimentation, layering, entrenchment, and reproduction. Co-construction entails the embedding of features along different dimensions. Sedimentation captures the tendency for elements to progressively become embedded in increasingly deeper levels. Specific processes dominate at each level. Existing layers in part determine whether new elements are retained, while new layers presuppose and lock in established layers. Through entrenchment, elements become linked to create feedbacks that result in self- and systemic-reproduction. Finally, society-nature relationships are reproduced through an ongoing material dialectic. Through these long-term processes, society and nature are entwined and relate on a societal scale.

Emergent coevolution, contingency, and the dynamics in settled and unsettled times

Contingency plays a crucial role in the ECF, and Ann Swidler's (1986) distinction between settled and unsettled times provides a specific way to conceptualize how dominant processes differ based on contingency to produce periods of stability and instability. In settled times established ideas, strategies and ways of life are largely seen as addressing society's problems, whereas in unsettled times established and accepted ideas, strategies, and ways of life are unable to address the problems at hand. While in settled times the way we do things can be largely taken for granted, the idea of unsettled times captures the general sense that society cannot keep going as it was.

Swidler's key insight is that the processes that distinguish between settled and unsettled times are contingent, depending upon context (1986; 2001). In settled times, ideas, strategies, and structures are integrated and reinforce one another. Established and more deeply embedded elements have the relatively "undisputed authority of habit, normality, and common sense" (Swidler 1986, p281) and therefore dominate. Conversely, in unsettled times, established ideas, strategies, and structures may be questioned, challenged, and jettisoned, while new strategies may be developed and adopted. When established common sense is contested, people attempt to establish new strategies of action, and ideologies may play a powerful role in reorganizing life (Swidler 1986). This distinction suggests that different, potentially opposing processes and mechanisms have more or less influence depending on whether a period is settled or unsettled. Thus, the explanatory power of ideas and other causal mechanisms are contingent and vary between settled and unsettled times.

The constructed stability of settled times

The Emergent Coevolutionary Framework provides a way to understand how contingency influences the dominant dynamics that distinguish settled from unsettled times. In settled times, processes of embedding and reproduction dominate. Shared ideas and strategies create much of the observed stability we see around us (Berger and Luckmann 1966). These processes, understood as the embedding of higher levels in lower levels through downward causation, help stabilize and control lower levels by reorganizing processes at those levels.

At the same time, sedimentation, layering, and entrenchment stabilize society and its society-nature relationship as an integrated whole over time. Through sedimentation, elements become increasingly embedded in lower levels (i.e. institutionalized, materialized). The constructed stability of belief systems is reinforced through social groups, identities, institutions, and interdependencies; as well as by material transformations (technology), artifacts (material symbols) and commitments (material resources) (Jessop 2010). Embedding features in deeper levels provides increased stability and durability. The contingent stability at the level of belief systems requires relatively little time or energy, but is most flexible as it is most quickly and easily changed or discarded. Social features, such as established norms and conventions, coordinated social actions, and practices embedded in interdependent roles and their relationships are more stable and durable because they involve life trajectories, learned skills,

strategies for action, and engrained habits that are ultimately co-constructed, but nevertheless involve collective practices. Material stability is the most energetically costly, but is also the most stable and durable. While it requires material and energetic investment, materialized ideas may persist without ongoing human action, and provide coercive stability through their embedded ontologies. The embedding of belief systems in social institutions and the material world, provides concreteness and momentum to the stability created by shared belief systems. Even when ideas change, engrained habits, social practices, and material changes propel and channel societies along established trajectories.

Layering and entrenchment further link, stabilize, and perpetuate features in relation to social wholes. Since more superficial or recently established layers are premised upon and presuppose deeper layers, as an element becomes layered into the system this results in increasing integration of a feature into the system over time. Any attempt to challenge or change an element will encounter resistance from the "weight" of layers presupposed upon it. Through entrenchment, positive feedback mechanisms maintain, expand, or reproduce the element or the system it is part of. Once entrenched, features or elements generate their own stability. Entrenched elements feedback as embedded ontologies, to be reproduced and spread as long at the system persists. Those feedbacks will tend to reproduce elements and the system unless they are disrupted.

Yet the stability of settled times is contingent upon lower levels. An important implication of ontological stratification is that the stability and persistence of higher level entities and processes are contingent upon the ongoing support from lower levels (Elder-Vass 2010). Indeed, a full causal explanation entails accounting for the entire pyramid of levels below the level of interest (Elder-Vass 2010). In an ontologically stratified world, higher levels of complexity emerge from and are dependent upon lower levels. Energy, material flows, and ecological metabolic functions are necessary to maintain complex systems of humans and nature. Yet complexity is energetically costly (Odum 2007). As such, complex systems are inherently unstable, in constant motion and prone to entropic decay. This is especially true for the social metabolism of complex societies. Complex societies and their society-nature relationships do not tend towards stability, but are energetically dissipative and far-from-equilibrium (Reed and Harvey 1992). Thus, the stability of society-nature relationships observed in settled times is

partial, fragile, and contingent in a material world where social systems must maintain a certain level of complexity through energy and material flows to persist.

Destabilization, escalation, and excavation in unsettled times

In unsettled times the stability of lower ontological strata can no longer be taken for granted, revealing how the processes that produce stability in settled times are contingent. Unsettled times involve two interacting dynamics: destabilizing forces, and co-constructivist dynamics, which may reverse from embedding and sedimentation to escalation and excavation.

Entry into and maintenance of unsettled times may be driven by a variety of destabilizing forces, both exogenous and endogenous. Exogenous forces tend to destabilize levels upon which society-nature relationships depend and include ecological crises, material and energetic degradation or limitation, and exhaustion (Streeck and Thelen 2005). Endogenous forces may involve higher levels, and include rational and moral critique, internal crises, social movements, and revolutions. Destabilizing forces will drive processes at the level they occur, as well as disrupt elements and processes at higher levels. For example an energy crisis that creates energy shortages at the level of human material life, will drive changes in manufacturing, but also destabilize groups and relationships at the social level, as well as established ideas or entire belief systems. In this way, destabilization and entry into unsettled times may be driven by underlying causal mechanisms at lower levels that destabilize higher levels.

Destabilization not only creates an unpredictable situation, but also disrupts and loosens co-constructivist constraints to create opportunities for change. Driven by destabilizing forces, established strategies are unable to address society's problems and accepted "common sense" can no longer be taken for granted (Swidler 1986). Thus, the widespread perception that something has "gone wrong" signifies entry into unsettled times (Goldstone 1991, p409). To dispel the destabilizing forces, a search for solutions ensues. In line with Swidler's view of unsettled times, Tolbert and Zucker suggest that significant changes are not only "likely to require a major shift in the environment" (1999, p178), but also require a reversal of the processes of institutionalization (and sedimentation more broadly). They continue, destabilization "may then allow a set of social actors whose interests are in opposition to the structure to self-consciously oppose it or exploit its liabilities" (ibid p178). Thus, in unsettled

times society may respond by reversing the processes of settled times, from embedding and sedimentation to escalation and excavation

Accordingly, a shift from sedimentation towards ***excavation*** occurs in unsettled times (Figure 6). In the search for solutions and in response to demands for change, the focus may shift from embedding elements to disembedding them, at least for elements deemed the source of the problem. Processes of legitimation may be replaced by de-legitimation, such that elements formerly justified are contested and societal consent is withdrawn. Former consensus on dominant ideas, institutions, and strategies may be problematized and politicized (Jessop 2010). The authority of leaders and elites may be contested (Goldstone 1991). In the place of increasing materialization, de-materialization may occur. Even processes of reproduction may be questioned, while disruption may be considered and enacted (Goldstone 1991).

The metaphor of excavation captures not only the reverse of sedimentation, but also that the depth of excavation progresses from superficial to deep through ***escalation***. Excavation occurs through a process of increasing escalation that originates in superficial ideological and moral critique. For instance, Jack Goldstone (1991) has documented how escalation occurs in social movements and revolutions. First, people make rational and moral demands to rectify injustices. These demands are driven by a combination of instability and social responses that "fan the flames" of moral and rational critiques. Yet significant change often cannot occur at the level of belief systems alone; it requires more substantive social and material changes at deeper levels. Authority and power relationships are challenged, and if destabilizing forces persist, deeply entrenched elements such as group identities, roles, and ways of life may be challenged and renegotiated. In this way, levels are progressively challenged and rejected, with most superficial ideological levels excavated first to reveal and challenge deeper social and material ones. Thus, escalation progresses from challenging and excavating superficial elements to more deeply sedimented elements until the destabilizing forces have subsided or been resolved.

Destabilization and excavation come together to determine the degree and nature of change in unsettled times. The degree and nature of change depends on the depth of destabilizing factors, the degree of excavation, and the interplay between these two factors. When destabilization is driven by exogenous forces, the depth of change required to resolve the destabilizing force reflects its level or depth of crisis (Jessop 2015). While some elements may be excavated, many others are retained. Therefore, a new system differs from the old to the

degree that elements of old have been excavated and replaced by new features. Another possibility is that the destabilizing forces do not subside or are not resolved through excavation and systemic adjustment. If the ability of the system to maintain itself is undermined, this may lead to exhaustion (Streeck and Thelen 2005) or collapse (Tainter 2011).

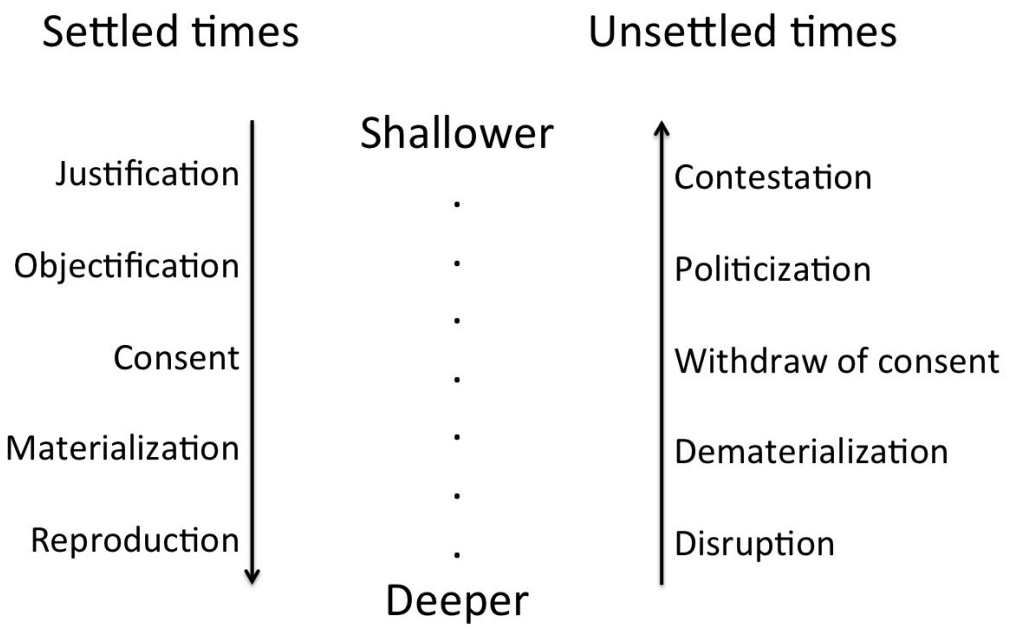

Figure 5.6. Proposed processes that dominate in settled and unsettled times.
Arrows indicate progression of sedimentation in settled times (left), and excavation in unsettled times (right).

Conclusion

I have proposed a novel conceptual framework to understand society-nature relationships and to explain how they evolve. The Emergent Coevolutionary Framework built from a critical realist philosophy of science, developing upon three core propositions: ontological stratification, co-constitution of levels at higher complexity, and coevolution. Synthesizing these propositions, I developed a conceptual lens to understand society-nature relationships as emergent and coevolving.

One important insight of this framework is the contingency of higher levels on lower levels. While some environmental sociologists have discounted critical realist frameworks for precisely this reason (van Koppen 2017), the contingency of higher-level causal mechanisms,

entities, and processes is critical to explanation in the environmental social sciences. In particular, contingency may account for and help to explain periods of stability and change.

Building on co-construction, this framework was used to develop discipline-specific concepts and theories. I proposed a distinction between settled and unsettled times based on the contingent nature of co-constructivist processes. Contingency means that different dynamics dominate in settled and unsettled times. In this way, the Emergent Coevolutionary Framework was used to develop discipline-specific concepts and theories that can be applied to empirical research.

The proposed dynamics in settled and unsettled times are a working hypothesis that can be empirically tested in specific contexts and applied to specific environmental problems. In particular, the distinction between settled and unsettled times provides a flexible framework that can be used to understand and account for periods of stability and change, but also how they come together over the long term. On the one hand, the co-constructivist dynamics in settled times can be used to understand and explain inability to affect transformations towards more ecologically benign ways of life. On the other hand, the dynamics in unsettled times can aid in understanding the relationship between crises and past failures to affect and the potential for environmental change. Moreover, the distinct dynamics of settled and unsettled times could be used to understand sequential processes of stability and change as a coevolutionary selection process. While others have proposed how such a coevolutionary process might look like from a complex systems perspective (Reed and Harvey 1992; Westley et al. 2002), the Emergent Coevolutionary Framework more fully captures the sociological processes involved. In these ways, this framework provides an integrative lens to understand the many ways that society and nature are entwined, and can be used to explain the paradox of growth in Canadian politics.

Chapter 6: Explaining the persistence of growth in Canada 1867-2017
A co-evolutionary process of settled and unsettled times

This chapter presents the main explanatory argument of this thesis. I demonstrate how my proposed Emergent Coevolutionary Framework, including different processes in settled and unsettled times, explains the persistence of economic growth in Canada 1867-2017. The chapter shows how the paradoxical story of growth can be explained as the evolution of an element becoming established and integrated into the dominant system as that system evolved through a sequence of settled and unsettled times. The chapter presents the empirical sequence of settled and unsettled times in Canadian federal politics 1867-2017, and then describes the relevant processes and dynamics that dominated in each settled or unsettled time, which led to the establishment and persistence of economic growth. I conclude by showing how the organization of these processes in settled and unsettled times produced and explains the seemingly paradoxical story of growth in Canada.

Having already presented much of the empirical evidence for this argument, this chapter revisits only key pieces of evidence to support this argument. I use data from political manifestos and other documents to show how the dynamics that dominated during each period of this sequence of settled and unsettled times constitute a coevolutionary selection process that both fits the empirical data and produces the phenomenon of interest – the persistence of growth in Canadian federal politics since 1970. Since the argument is that the proposed coevolutionary explanation accounts for the persistence of economic growth better than alternate explanations, I conclude with a discussion about how my proposed coevolutionary explanation accounts for evidence that alternatives are unable to account for.

A coevolutionary explanation for the persistence of growth in Canadian politics

According to this coevolutionary explanation, economic growth became established and entrenched in the system through a sequence of settled and unsettled times and the different dynamics that dominate in these times. The historical sequence of settled and unsettled times and the different dynamics that dominate provides the skeleton of this coevolutionary selection process. Building upon previous periodizations in Canadian (Jenson 1990; Riendeau 2007) and international (Zuindeau 2007; Streeck 2014) political economy, periods of settled and unsettled

times were identified in Canadian politics of the economy and environment (Table 6.1). This sequence of settled and unsettled times, as well as the macro-dynamics and processes that explain the persistence of economic growth through a coevolutionary lens are described in detail.

Table 6.1. Settled and unsettled times in Canadian politics of the economy and the environment

Year	Period	Settled / unsettled
1867 – 1878	Unknowing growth I: National Integrity	Settled
1878 – 1929	Unknowing growth II: National Policy	Settled
1929 – 1945	Foundations of growth: Great Depression - WWII	Unsettled
1945 – 1970	Establishing, sedimenting, and entrenching growth	Settled
1970 – 1982	Growing pains in an unsettled time	Unsettled
1982 – 2008	Renewed growth in a time of neoliberal globalization	Settled
2008 – 2017	Polarization, populism, and deep fissures	Unsettled?

1. Unknowing growth (1867-1929)

The dominant belief system can be understood as a complex system, emerging from and co-evolving within its historical, socio-political, and ecological contexts. The National Integrity and National Policy periods were relatively settled times in which the dominant belief system evolved. Economic growth remained an ontological propensity, but was not explicitly conceptualized or pursued.

1.1. National Integrity (1867-1878)

With the founding of the nation, the dominant belief system emphasized settlement, immigration, developing wild lands, and expanding the nation. This belief system presupposed a certain ontology including colonialism, private property, and the domination of nature. Economic growth was not yet an explicit part of the dominant belief system, although it was an ontological propensity of the system. Indeed, the economic activity of the country (at least that of the European settlers) was increasing. However, this was primarily extensive growth rather than intensive growth: growth through colonization, immigration, settlement, and territorial expansion. This has been called defensive expansion (Riendeau 2007). As Canada became a nation, the economy was dominated by the extensive growth of colonialism and nation-building.

Growth through colonialism took the form of immigration (increasing population) as well as the settlement, development and cultivation of wild lands. Growth through nation-building entailed increasing Canada's territory by aggregating the provinces into a single union, as well as the creation of a militia to protect the union from external threats. Expansion and development were driven by the need for national survival and integrity in the face of threat of invasion from the United States. Economic growth was not explicitly conceptualized or discussed and therefore not yet an element of the dominant belief system. Thus, growth was an ontological propensity – one possibility but not an inherent feature of the system.

1.2. The National Policy (1878-1929)

John A. MacDonald introduced the National Policy as an explicit political program in 1878, and it became sedimented over the subsequent decades: it was institutionalized and materialized through infrastructure projects such as railways, industrialization, the creation of interdependence between rural agricultural producers and urban manufacturers and protective tariffs favouring export trade to the British Empire. Industrialization and the increasing interdependence between agriculture, manufacturing, and export trade were mutually reinforcing processes under the National Policy: "…that our wild lands would be speedily populated by progressive farmers, these in turn providing manufacturers and merchants with an increased home market, and so stimulating every branch of industry in the Dominion" (Con 1900, p44). By the time MacDonald lost to the Liberals in 1896, the National Policy had evolved from being a partisan political program to becoming increasingly institutionally embedded and materialized. Sedimentation had occurred so that the National Policy was embedded in multiple ways; it had become a reality that the Liberals could not simply do away with.

The National Policy was layered upon elements of the National Integrity era, including colonial policies of immigration, settlement, and the development of land and other resources. During this settled time, processes that began in the National Integrity era continued to be reproduced. The land was settled and developed. Canada built railways, encouraged immigration, and granted land. Immigrants settled that land, cleared it and brought it under cultivation. And during this period Canada was transformed from a largely agricultural to a predominantly urban society (Riendeau 2007).

Again, economic growth was an ontological propensity, but not part of the dominant belief system. Economic growth did occur, but Canada largely survived off the energetic and material flows of economic activity and export to the British Empire, which itself may have been growing both intensively and extensively. In Canada, this extensive growth evolved to become intensive growth by the end of the National Policy era.

2. Foundations of growth: the Great Depression to WWII (1929-1945)

The period from the Great Depression until WWII was an unsettled time and the dynamics that dominated this period were quite different than the previous settled times. Canadian federal politics was subject to a number of persistent destabilizing forces. These destabilizing forces included the Great Depression, mass employment, fascism, and World War II, and contributed to a persistent societal sentiment that existing strategies were inadequate to the problems of the day.

With the Great Depression, unemployment escalated and was seen as a persistent societal problem from 1929-1939 (Bothwell et al. 1987). In 1930, Canadian federal political parties were most concerned with social issues associated with the Great Depression, including economic issues such as unemployment, and living standards. Yet these problems persisted and existing solutions were inadequate. Carrigan remarks, "standard patterns were no solution for mass unemployment" (1968, p107). Instead, the unsettled time from the Great Depression until the end of WWII amounted to and legitimized a massive disruption in livelihoods and cultural norms, and excavated much of what the National Policy had been premised upon. Parties began to question and challenge conventional thinking. For instance, while parties held onto their positions about free trade versus protective tariffs, they switched their traditional positions so that now the Conservatives supported free trade with the USA, while the Liberals advocated the British preference. But persistent problems drove the search for solutions "outside the framework of the established political parties," and by 1935 three new political parties were contested the election (Carrigan 1968, p116).

By 1935, concerns over unemployment had escalated. The provinces needed help addressing costs for welfare and unemployment relief, and turned to Ottawa for help (Bothwell et al. 1987). The balance of responsibility for addressing unemployment shifted from the provinces to the federal government. In 1935, Prime Minister R.B. Bennett recognized there

were fundamental problems with the economic system, and especially the persistent drain caused by unemployment relief, called the dole. Bennett declared the dole "a condemnation, final and complete, of our economic system. If we cannot abolish the dole, we should abolish the system" (Bennett quoted in Bothwell et al. 1987, p267). This crisis drove Bennett to challenge conventional wisdom and call for change. He proposed a New Deal, with radical economic reforms, including progressive taxation, a maximum work week, a minimum wage, regulation of working conditions, unemployment insurance, health and accident insurance, a revised old-age pension and agricultural support programs. The Liberals also viewed the unemployment situation as a crisis, referring to the "present emergency conditions" (Lib 1935, p127), and declaring unemployment "Canada's most urgent national problem" (Lib 1935, p116). Ultimately, Bennett's New Deal was seen as interventionist and was not implemented before Mackenzie King was elected to replace Bennett as Prime Minister in 1935.

This unsettled time persisted, providing the selection environment to excavate even deeper: the role of the state was expanded and redefined to be responsible for ensuring full employment through full production. WWII legitimated and drove deep excavation, resulting in shifts in underlying layers, including groups, identities, and ways of life. By the 1940 election, WWII had begun, and the war effort legitimated a societal-wide mobilization and reorganization. The War Measures Act allowed governance by decree and sweeping macroeconomic management to supply the war effort. This meant increasing the productive capacity of Canada's economy to full production (Bothwell et al. 1987). Full production drastically reduced unemployment, and this did not go unnoticed. This link was both a practical observation as well as normative. Full production was seen as the solution to unemployment, but also as a ward against fascism. In this way, the unsettled time from the Great Depression to WWII provided a selection environment that drove the industrialization of society, but also redefined the role of the state to deliver full employment and link it to full production.

In sum, during the unsettled time from 1929-1945 the National Policy was destabilized and excavated, and the foundations for a new dominant macroeconomic approach were established. Through this process, the state's role was redefined. It became responsible for ensuring full employment by pursuing full production in an industrialized economy. From this perspective, WWII was not the primary destabilizing force of this unsettled time, but instead drew Canada out of it. WWII addressed unemployment by providing the stability of full

production, but also a common goal and enemy. WWII legitimated a unified national direction and provided a solution to the problems of the day. During this time, economic growth was not yet explicitly pursued, but the precursors to growth and the elements that would form the basis for a growth-based economy were established.

3. Establishing, sedimenting, and entrenching growth: post-WWII reconstruction and development (1945-1970)

The end of WWII brought a settled time anchored in both a new international context with associated institutions, and a new societal vision and project in Canada. The National Policy, which had been largely excavated during the previous unsettled time, was replaced by a new optimism and macroeconomic paradigm focused on post-WWII reconstruction and development. Central to this new direction was the recently established responsibility of the state for full employment by pursuing full production. The expanded role of the state was to provide employment, social security, and post-WWII reconstruction, and development – both at home and abroad. Keynesian macroeconomics and welfare state thinking provided the tools to pursue the macroeconomic management that this project prescribed.

However, despite this new way of thinking, deeper layers laid down in the National Policy and National Integrity eras were not discarded, but retained and built upon. The post-WWII project relied upon previously established elements such as increasing consumption, production, industrial development, and export trade. It also presupposed colonial settlement and dependence on resource development, emphasizing export of Canada's largely unprocessed natural resources rather than mass production and identifying "the country's great natural resources rather than its workers as the source of Canada's economic greatness" (Jenson 1989, p81-2).

Interface and anchors: the role of the state to ensure full employment through full production

Two things provided an interface, anchoring the emerging welfare state to the previously existing system. First, the redefined role for the state was linked to employment through the means of full production. Having emerged during the Great Depression and WWII era, the role of the state was redefined from survival and defensive expansion as part of the British Empire to ensuring jobs and affluence in the welfare state. Second, a new societal direction was articulated

in the 1945 White Paper on Employment and Income. Both are captured clearly in the White Paper.

In June 1945, as the war wound down, C.D. Howe tabled the Canadian White Paper on Employment and Income in parliament. In government from 1935 – 1957, Howe was dubbed "the minister of everything" for his role in the war effort and was credited for transforming the Canadian economy from agriculture-based to industrial. Howe was the Liberals' recently named Minister of Reconstruction and would oversee Canada's new direction.

The White Paper outlined the government's comprehensive plan to transition from a wartime economy to a peace economy. It declared, "The central task of reconstruction, in the interest of the armed services and civilians alike, must be to accomplish a smooth, orderly transition from the economic conditions of war to those of peace and to maintain a high and stable level of employment and income. The Government adopts this as a primary object of policy" (Government of Canada 1945, p536). Thus the White Paper clearly articulated the government's responsibility for employment through the means of national income as a primary policy objective.

Moreover, the White Paper recognized how wartime full production had addressed unemployment, and declared the pursuit of full production to be the responsibility of the government. First, the document acknowledged that the war drove full production: "During more than five years of war, Canada has continued to mobilize and expand its full productive capacity. Government, Labour and Management have been united together in the common objective of winning the war. The same united effort can win our postwar objectives" (Government of Canada 1945, p549). Second, the resolution of the Employment Problem was directly linked with war expenditures: "At present, these additional jobs, and more, are provided by government war expenditures, which will be curtailed just as soon as the requirements of war permit" (Government of Canada 1945, p537). As such, C.D. Howe's 1945 White Paper clearly articulated the links forged between government responsibility, national income, and employment during the previous unsettled time, and sought to institutionalize them.

Central to this plan was the government's role to deliver employment and income: "the Government has stated unequivocally its adoption of a high and stable level of employment and income, and thereby higher standards of living, as a major aim of Government policy" (Government of Canada 1945, p549). It laid out specific ways the government planned to

achieve high levels of employment and income: export trade, private investment, increased consumption through increased incomes, and public investment in productivity, welfare and opportunities (Government of Canada 1945, p538).

The White Paper was not meant as a specific policy, but to "set out the broad lines of long-term reconstruction policy which the Government proposes to follow" (Government of Canada 1945, p536). This was not conceived simply as a government initiative, but as a societal endeavour. The White Paper declared,

> It has been made clear that, if it is to be achieved, the endeavour to achieve it must pervade all government economic policy. It must be wholeheartedly accepted by all economic groups and organizations as a great national objective, transcending in importance all sectional and group interests (Government of Canada 1945, p549).

Demonstrating its central importance, the Liberals promised: "The Liberal Government has the man - the Hon. C.D. Howe - under whose direction Canadians have done a great job in the war, and are ready to do it in peace" (Lib 1945, p157). The Conservatives also prioritized reconstruction and development, and proposed a national development plan as part of their platform. Thus, similar to Mackenzie King's National Policy, the Canadian White Paper on Employment and Income would provide the launching platform for post-WWII reconstruction and development, as well as the growthmania that would quickly emerge.

The multi-dimensional embedding and sedimentation of growth

Building upon this new role of the state as responsible for full employment through full production, economic growth became established and integrated into the dominant system during the post-WWII period. Growth was pioneered, institutionalized, and became a core feature sedimented into the Canadian political economy. Although growth existed as an empirical fact before this period, Gross National Product (GNP) was only conceptualized by Simon Kuznets in 1936 and first measured by Statistics Canada in 1952. Canada's system of national accounts (SNA) was developed in the late 1940s and early 1950s, and in 1952 Statistics Canada released its first GNP figures (McDowall 2008). The SNA allowed government to understand the structure of and flows of money through the economy. Finance ministries and budget speeches quickly became structured around the SNA (McDowall 2008). The SNA enabled politicians to not only see and understand growth, but also to promise and pursue it.

The Liberal party pioneered economic growth as a political strategy during economic downturn in 1957. Initially, justification and contestation dominated. Other parties contested the merits and desirability of both pursuing and government claiming credit for growth, while the Liberals felt compelled to justify the pursuit of growth (Lib 1963). Again, in 1965 the Liberals explicitly justified why growth was their top priority, arguing that jobs require growth: "Because of our growing population, there must be more jobs and they must be productive jobs that can pay good wages. That's why the liberal government gives top priority to policies for economic expansion" (Lib 1965, p310). In this way, the Liberal party acted as an ideological carrier, pioneering economic growth as a successful political strategy for survival and to win election.

Economic growth was both institutionalized and materialized. In addition to being institutionalized in the White Paper and Statistics Canada's SNA (McDowall 2008), the Gordon Commission also legitimated the pursuit of economic growth. In 1955, the government announced a royal commission called the Gordon Commission to study Canada's economic prospects. This commission relied heavily on the new SNA, which enabled it to understand and measure the economy. In 1957, the Gordon Commission report forecast that Canada's future would yield continued growth into the 1980s. The Liberals declared "The Gordon Commission has painted a bright and glowing picture of Canada in 1980, but it is not necessary for Canadians to wait until 1980 to experience and enjoy the benefits of that expansion" (Lib 1957, p2). The Liberals also institutionalized the government's role in economic management, promising to set up an Economic Advisory Council to "assist in full economic efficiency and progress" (Lib 1962, p264). In these ways, economic growth was institutionalized.

Growth was also embedded in material processes and was given material embodiment. After WWII, the Canadian economy shifted away from being dominated by agricultural exports, and towards mass production and consumption, as well as new industries based on exporting unprocessed natural resources by multinational corporations through GATT (Jenson 1989). In this way, intensive growth was materialized through industrialization, consumer society, urbanization, and increasing export trade in the post-WWII project of reconstruction and development.

Pursuing economic growth also meant material changes such as transportation and energy. For instance, the NDP declared, "Since economic progress rests ultimately on power and transportation [Canada must] develop rational and balanced energy and transportation systems"

(NDP 1962, p273). To this end, the NDP promised to establish a federal Energy Commission to develop and distribute "all forms of energy resources - coal, oil, natural gas, electricity and nuclear power" (NDP 1962, p273). From 1957 until 1963, growth was materialized in Prime Minister Diefenbaker's Road to Resources program, in which he built roads, national pipelines, and energy infrastructure. In these ways, economic growth was not only embedded in the dominant belief system, but also institutionalized and materialized in new organizations, practices, material changes, and ways of life. Thus, economic growth quickly became sedimented, moving from being a contested idea to being increasingly institutionalized and materialized.

The linking, layering, and entrenchment of growth: national unity and the welfare state

Economic growth also became linked with features such as national unity and the welfare state. Economic growth and welfare state programs were linked through dominant beliefs that economic growth was the means to deliver welfare state programs, but also institutionally and through real practices. The link between economic growth and the welfare state was institutionalized through the federal-provincial shared-cost programs by which the federal government agreed to pay half of provincial medical insurance plans, as well as education plans (Riendeau 2007). As the welfare state programs increased, costs would also increase. In turn, economic growth and the welfare state were linked to national unity because the extension of the welfare state "further upset the balance between federal and provincial responsibilities" (Riendeau 2007, p327). During the 1960s, cost-sharing and equalization payments resulted in increasing federal-provincial tensions, but these tensions could be appeased through growth (Riendeau 2007).

Moreover, growth became entrenched through several feedback loops. First, promising growth led to political success, as illustrated by the electoral success of the Liberal party. This created a positive (reinforcing) feedback loop. Pursuing growth allowed parties to make more promises to voters, and meant political success during elections, so parties promised more growth. Second, while welfare state programs exacerbated national unity tensions, growth appeased. Growth meant there was always a bigger pie for federal-provincial transfer payments. This created another positive feedback loop. Less growth meant the federal government could not as easily appease national unity tensions, so parties were encouraged to pursue growth.

Third, a positive feedback developed between how Statistics Canada's measured prosperity and the political decisions that reinforced those ways of measuring prosperity. Statistics Canada's system of national accounts measure both output (growth) and the stocks of capital. As growth was adopted as a political objective, output was increasingly favoured over capital accounts as a measure of prosperity. More focus and resources were dedicated to measuring output than capital stocks. Increasingly, economic growth (output) was better measured and understood than capital, so politicians were able to promise and pursue growth even more effectively. Thus, growth became not only linked and layered into the dominant system, but also entrenched through feedbacks.

To summarize the key dynamics during the 1945-1970 period in Canadian politics, economic growth became quickly established, sedimented, and entrenched in the dominant system. Since WWII, it has been linked to the role and responsibility of the state to provide social welfare and full employment. This role was anchored by C.D. Howe's White Paper, and the overarching societal project of post-WWII reconstruction and development that the White Paper articulated. This project was ***layered*** upon and presupposed this new role of the state, but was also linked to the specific means of pursuing post-WWII reconstruction and development that, at least in part, built upon elements from the National Integrity and National Policy eras. Reflecting the processes of ***multi-dimensional embedding*** and ***sedimentation***, economic growth progressed from contested to consensus, to being an increasingly institutionalized and materialized element embedded in the system. Moreover, growth coevolved with and became linked with and ***layered*** upon by elements of the welfare state and national unity, as well as energy and natural resource development. These links resulted in ***feedbacks*** that locked in the governments' role and responsibility to deliver economic security and stability by pursuing economic growth.

4. Growing pains in an unsettled time (1970-1982)

The unsettled time from 1970-1982 is crucial to explaining the persistence of growth as a primary policy objective in Canadian politics. On one hand, an increasing environmental consciousness had emerged in the late 1960s in response to the rampant industrial growth of the 1940s and 1950s. By the early 1970s, deep environmental critiques of the status quo had emerged, targeting facets of modern life including industrialization, capitalism, consumerism,

unrestrained markets, greed, urbanization, population growth, and pollution. On the other hand, environmental issues were not the primary destabilizing force that drove Canada into an unsettled time. Instead, the primary destabilizing forces were economic instability, energy security, and national unity. These destabilizing forces persisted throughout the 1970s, and combined to create a general societal feeling that existing strategies were insufficient to address society's problems of the times. Tellingly, in 1979 the Liberals described the 1970s as a series of crises in energy, international markets, and the economy:

> The past decade, particularly since the early 1970s, has witnessed continual upheavals in the world's economies. The escalating costs for energy; the massive shift of financial resources to the oil producing countries; wild fluctuation of currencies; the instability and the emergence of newly-industrialized countries in the Third World; and changes in the pattern of population growth and structure of the work force, have all contributed to unstable global economic conditions. These conditions have generally been characterized by spiraling inflation, coupled with economic stagnation (stagflation) and high unemployment (Lib 1979, pE-1).

This unsettled time was the selection environment in which the dominant system evolved. From 1968-1973, the Liberal government encountered structural constraints that made challenging growth a high political risk. From 1973 onwards, destabilizing forces favoured economic and energy priorities that were pro-growth. Although environmental issues may have been important, they did not drive the agenda. Short-term crisis management created new problems, which in turn demanded solutions. These dynamics selected for pursuit of economic growth and its further entrenchment rather than its rejection. Although some features of the post-WWII system were excavated, growth was not one of them.

Structural constraints and conventional wisdom (1970 – 1973)

Until the 1970s, a main responsibility of the state was to deliver full employment through economic growth. Keynesian macroeconomics provided the means to manage the welfare state, and conventional wisdom held that, according to the Phillips curve, inflation and unemployment were inversely related. As such, Keynesian macroeconomic management relied on balancing jobs and growth against inflation. Within this conventional wisdom, economics prescribed two

main approaches to balance this trade-off: a combination of decreased taxation and fiscal stimulus was the medicine for a sluggish economy and high unemployment, while the solution to inflation was higher taxes and reduced government spending (Bothwell et al. 1989).

Within this logic, economic growth and full employment were not seen as purely good, but also as having negative impacts, namely inflation. Thus, in the early 1970s, the trade-off of the Phillips curve provided P.E. Trudeau with space to question the imperative to deliver jobs and growth. Indeed, from 1968 until 1972, Trudeau's Liberal government worked within the conventional wisdom of the Phillips curve, attempting to balance economic growth and employment against inflation, essentially limiting economic and job growth to reduce inflation.

However, from 1968 until 1972 these conventional assumptions became increasingly untenable, so that balancing the trade-off between jobs and growth versus inflation became a political risk. At first economic growth had continued, while inflation was an increasing problem. Then, in 1972 unemployment spiked despite continued growth, and the Liberals reversed their strategy, promising economic growth and jobs at the expense of inflation (Turner 1972). In the 1972 federal election, all parties proposed solutions within the conventional wisdom, each adopting a different position on how the economy should be managed in relation to the Phillips curve. The Liberals' initial strategy of limiting jobs and growth proved a liability, even as P.E. Trudeau's popularity was flagging. In the 1972 election campaign the NDP attacked Trudeau on the employment front: "The Trudeau government deliberately chose to induce paralyzing unemployment as an answer to inflation" (NDP 1972, p2). Meanwhile, the Conservatives accused Trudeau of slowing down the economy to manage inflation: "The decision of the government to slow down the economy through much of the 1969 and 1970 in an abortive attempt to curb inflation has cost more than 5 billion dollars annually in lost output" (Con 1972, p5). Not pursuing growth left the Liberals vulnerable to attack, a mistake they would not repeat.

The 1972 election yielded a Liberal minority. P.E. Trudeau's minority government was vulnerable and remained propped up until July 1974 only with the support of the NDP. Trudeau's policy was clearly influenced by the minority government and the need to appease the NDP. From 1973 until the end of Trudeau's tenure in 1983, Liberal budgets declared economic growth a top priority (for example, see Turner 1973; 1974; Chretien 1978).

In sum, the trade-off of the Phillips curve provided some room to question the primacy of economic growth in the early 1970s. However, as the economic situation escalated, the conventional wisdom of Keynesian macroeconomics and the Phillips Curve were increasingly untenable. While the Liberals had briefly chosen not to pursue growth as their primary policy objective, the 1972 election and minority government made pursuing growth an imperative for political survival.

Changing structural dynamics and responses to ongoing crises (1973 – 1982)

Then, a series of crises and destabilizing forces drove Canada into an increasingly unsettled time. The 1973 OPEC oil crisis caused the price of oil to increase dramatically. Exacerbated by the energy crisis, stagflation became even more pronounced. The combination of both rising inflation and unemployment that characterized stagflation contradicted the conventional wisdom of the Phillips curve (Staudohar 1979). Existing solutions were no longer up to the task.

It was unclear how the government should handle the economic crisis of stagflation. In their 1973 budget speech the Liberals pleaded with Canadians to reduce demands so as to halt the inflationary spiral (Turner 1973). A year later, they argued, "The challenge facing the country is to break the inflationary spiral. But we must do this in ways that will not erode our prosperity nor damage our growth" (Turner 1974, p1). They rejected anything that would threaten growth and jobs: "In our fight against inflation, I have rejected two possible approaches. One is the deflation of demand by severe measures of fiscal and monetary restraint. The effect of this would be stagnation and rising unemployment. In my judgment, such a cure would be worse than the disease" (Turner 1974, p6).

As the situation continued to escalate, pressures increased to take actions that rejected established strategies that had previously been conventional wisdom. The 1974 election focused primarily on economic and energy issues. Inflation was the key issue and Conservative leader Robert Stanfield proposed a 90-day wage and price freeze. At Stanfield's expense, Trudeau argued that you could not simply freeze prices and wages, and mocked the idea as saying, "Zap! You're frozen" to the economy. Trudeau's Liberals soundly won the 1974 election. Stagflation persisted and the trade-off between jobs and growth versus inflation became even more stark. In

October 1975, shortly after having denounced price and wage controls during the election, the Liberals implemented them.

For the remainder of the 1970s, the Liberals would continue to search for solutions, shifting from wage and price controls to reducing the deficit to systematically cutting taxes and increasing spending in an attempt to stimulate economic growth (Bothwell et al. 1989). Lurching from one problem to the next, the Liberals' search for solutions left their macroeconomic policy appearing ad hoc and incoherent for much of the unsettled time of the 1970s. Indeed, policy-making from 1973 until 1980 has been called "'ad hocism' practiced with a vengeance" (Bradford 1999, p34). As Bradford emphasizes, "The governing paradigm was in crisis, but no alternative had yet been formulated, much less embedded" (1999, p35). As such, proposed solutions remained within the bounds of "familiar postwar learning routines" (Bradford 1999, p34) – that is, previously established conventional wisdom such as the Phillips curve, Keynesian economics, and the responsibility of the state to deliver jobs and growth. As problems persisted and escalated, existing strategies were unable to address those problems and much conventional wisdom was excavated and discarded. Ultimately, growth was not excavated, but pursued anew.

The further entrenchment of growth

Not only were environmental concerns no longer a top priority, but destabilizing forces and political responses also drove the system in the opposite direction, towards pursuing and further entrenching growth. This occurred through issues that were seemingly unrelated such as unemployment insurance, energy policy, and national unity.

First, economic growth was linked to welfare state programs and national unity through equalization. In 1971, unemployment insurance had been extended significantly, so that it was much easier to get (Bothwell et al. 1989). This extension of social services would "develop a nation-wide constituency that would naturally look to Ottawa for help" (Bothwell et al. 1989, p341). However, relying on this political lubricant would cost dearly. By the mid-1970s, the economy had entered a period of decline. As unemployment grew, demands for unemployment insurance also grew, requiring increasing funds. With continuing inflation and unemployment, unemployment insurance was an increasing drain on federal finances. The combination of energy subsidies, increasing unemployment and economic decline resulted in increased government debt. The Federal government was caught between the demands of the welfare state for growth

and managing its deficit. As government debt ballooned, the federal government had no way of controlling increasing costs tied to the shared cost programs of the welfare state established in the 1950s and 1960s (Bothwell et al. 1989). To address these pressures, the Established Programs Financing and Fiscal Arrangements Act between the provinces and the federal government was passed in 1977. It defined a new formula for health care, hospitalization and post-secondary education, and for equalization between the provinces, switching from split cost to an arrangement that linked federal contributions to GNP (Bothwell et al. 1989; Riendeau 2007). The result was a further entrenchment of growth by explicitly tying federal contributions to the cost-sharing program to economic growth.

Second, the energy crisis drove growth and exacerbated national unity tensions. The 1973 OPEC "oil cartel" was used as a weapon against the oil-dependent Western countries, which had to either reduce their energy consumption or pay more to maintain their consumption (Toye 2014). Unlike many other countries, Canadian production and use of oil was split. The Western provinces produced and exported more oil than they consumed, while the Atlantic provinces and Quebec imported oil. In response, the Federal government established a nation-wide oil price, subsidized oil imports for Quebec and the Atlantic provinces, and maintained domestic oil prices below world levels (Bothwell et al. 1989). On December 6, 1973, P.E. Trudeau announced PetroCanada would be created. The government would build pipelines, develop the tar sands, and control prices so that Eastern Canada would use price-controlled oil (Bothwell et al. 1989). These attempts to manage the different regional impacts of the oil crisis exacerbated national unity tensions and drove Western Alienation. Western oil-producing provinces wanted world oil prices, while Eastern oil-consuming provinces wanted lower prices.

Moreover, the federal government pursuit of energy development as a means to energy independence and security drove growth in energy production and consumption. Despite rhetoric advocating energy independence through energy development and conservation, the outcome was increased growth in production and consumption rather than conserving and limiting use of energy (Bothwell et al. 1989). In his 1978 budget, Minister of Finance Jean Chretien declared, "it will be important to extract as much oil as technologically possible from all deposits" (Chretien 1978, p10). By 1979, Canada was again a large net importer of oil.

Thus, when the Trudeau government responded to crises, unintended consequences resulted in the further pursuit and entrenchment of growth. First, growth was been linked to

national unity and welfare state programs by tying equalization payments to the provinces to GNP. Second, the oil crisis drove growth in energy development and consumption, but also exacerbated national unity tensions.

In sum, 1970-1982 was an unsettled time during which the macroeconomic paradigm of Keynesian economics was excavated and discarded, but economic growth was even further entrenched. Environmental ideas that challenged growth were discarded, not because they were illogical or morally unjustified, but in response to dynamics of the dominant system as it evolved in an unsettled time. Although economic growth was initially challenged on environmental grounds, those challenges remained superficial. In contrast, destabilizing forces acted at deeper levels, disrupting energy supplies, Canadians livelihoods, the cost of living, and labour unions. These destabilizing forces and persistent problems drove excavation. However, Keynesian macroeconomic ideas and the Phillips curve were excavated, not economic growth. As the Canadian government attempted to address its problems, solutions had unintended consequences that further entrenched economic growth. This unsettled time was brought to an end when P.E. Trudeau adopted neoliberal policies in 1982, he appointed the MacDonald Commission, and global economic instability abated.

5. Renewed growth in a time of neoliberal globalization (1982-2008)

The period from 1982 until 2008 was a settled time, characterized by the dominance of a new macroeconomic paradigm called neoliberal globalization. Neoliberal globalization emphasized macroeconomic reforms such as economic openness and a rollback of the state. These reforms included fiscal restraint (deficit reduction), decreased taxes, and free trade. These objectives were established and integrated into the dominant system, through processes of layering, sedimentation and entrenchment. Importantly, neoliberal globalization was layered upon and entailed renewed pursuit of economic growth.

In turn, elements of neoliberal globalization that fit with existing layers became established and sedimented include free trade, deficit reduction, the ideals of a smaller state and low taxes, and the knowledge-based economy. This process of layering and selection extended to environmental governance so that, in general, environmental approaches were selected to fit with neoliberal thinking, economic growth, and deeper layers of the dominant system.

Anchoring neoliberal globalization: economics, business lobby, and the MacDonald Commission

In the wake of the previous unsettled time, P.E. Trudeau's Liberal government had been unable to establish a compelling solution (Bradford 1999), and when Brian Mulroney won the 1984 election, Mulroney had not yet articulated a clear vision (Inwood 2005). In this context, the MacDonald Commission provided a key anchor in the shift from the unsettled time of the 1970s to the settled time of neoliberal globalization. As Inwood observes:

> the Macdonald Commission reflected the disharmony in Canadian political discourse. The post-war Keynesian consensus, shattered after a series of successive crises in the 1970s, had not been reconstructed and was in a state of disarray in the early 1980s. [...] social democratic nationalist economic development strategies [...] had not been entirely abandoned or discredited. Nonetheless, a contrary view was emerging based in mainstream economic theorizing in search of a new set of neoconservative continentalist strategies. The post-war breakdown in consensus concerning Canadian economic development strategies had not been replaced by a new conventional wisdom (2005, p7).

Tellingly, free trade was neither supported by P.E. Trudeau nor a significant priority for Mulroney when the Commission's report was released (Inwood 2005). Indeed, when he was elected in 1984, Mulroney initially rejected the MacDonald Commission and its recommendations.

Even still, the MacDonald Commission provided a rallying point for forces that had become mobilized during the 1970s, and these forces contributed to the rapid sedimentation of neoliberalism. The failure of government interventions and Keynesian economics to resolve economic problems in the 1970s had driven shifts in economic thinking, the dominant approach to governing, and the balance of power. Throughout the 1970s P.E. Trudeau had relied on managerial planning, an interventionist state approach to markets, and Keynesian welfare state economics. These interventionist failures in the 1970s led to a backlash in the early 1980s, with the Canadian business community organizing and mobilizing to restructure state-economy relations (Bradford 1999). In response to Trudeau's nationalist and interventionist economic and energy policies of the 1970s, neoconservatism emerged on the political right. This movement combined continentalist elements of traditional conservatism with the free market/state anti-intervention orientation of business liberalism (Inwood 2005). From 1983, neoconservatism was

driven by organized economic interests led by the Business Council on National Issues (BCNI), the largest business lobby in Canada:

> By 1983, business had responded in a coherent and strategic fashion to changed economic and political conditions. [...] it developed a sweeping agenda for change anchored by an expansive interpretation of the principle of the rights of property holders and investors. [...] The policy Trojan horse for this restructuring of state-economy relations, of course, was continental free trade (Bradford 1999, p39).

The MacDonald Commission initiated debate and helped fashion an elite consensus favouring neoliberalism. The commission brought together a coalition of business interests and neoliberal economists, and resulted in an alliance among those groups and the Conservative right (Inwood 2005). The commission's final recommendations in support of free trade were unduly and disproportionately influenced by business interests and economists (Inwood 2005). Bradford emphasizes "The commission proposed a paradigm wholly consistent with its neo-liberal reading of the new reality, filtered as it was, by business critiques of government failure and neo-classical economic celebrations of market efficiency and rationality" (1999, p40). Thus, despite its broad mandate and extensive consultations, the MacDonald Commission officially endorsed neoliberal ideology (Inwood 2005).

The result was transformative compared to what Canada might have looked like in the absence of the resultant shift in thinking and policy. The report and its apparent consensus legitimized Mulroney's decision that led to NAFTA (Inwood 2005). Ultimately, Mulroney embraced the MacDonald Commission's recommendations for free trade and dismantling the welfare state's social welfare regime (Bradford 1999). These decisions both anchored the foundations for neoliberal globalization and further presupposed and entrenched the growth imperative.

Canadian environmental governance: rejection of limits, endorsement of growth

Although neoliberalism rejected post-WWII Keynesian welfare state economics, it presupposed and was layered upon much of the pre-existing system. As Chapter 3 demonstrated, neoliberal policies presupposed the imperative of delivering jobs and growth, while managing for inflation and the underlying elements of consumerism, production, industrialization, trade,

and natural resource development. In turn, these elements presupposed the settlement and cultivation of the National Integrity and National Policy eras.

Likewise, Canadian environmental governance has largely presupposed and been layered upon the idea that economic growth and environmental protection are compatible. The 1987 Brundtland Commission brought the environment greater attention, but in a way that allowed for growth. Economic growth was not rejected, but endorsed as essential for global solutions: "Far from requiring the cessation of economic growth, it recognizes that the problems of poverty and underdevelopment cannot be solved unless we have a new era of growth in which developing countries play a large role and reap large benefits" (Brundtland 1987, p39). With sustainable development, the Brundtland Report institutionalized the idea that economic growth and environmental protection were compatible. Both could be pursued and achieved simultaneously. This perspective echoed the techno-optimistic aspirations of an infinitely growing knowledge-based economy.

The mainstream debate about whether economic growth and the environment were compatible, and whether economic growth should be challenged was over. The Brundtland report legitimized a pro-growth view of the economy-environment relationship and it became common sense not to question economic growth. In 1987, this approach was institutionalized in Canadian federal politics as the National Task Force on the Environment and Economy. The task force was mandated to "foster and promote environmentally sound economic development" and quoted the Brundtland Report's emphasis that this could be done "in a new era of economic growth" (NTFEE 1987, p1). The task force led to the creation of both national and provincial round tables. When the National Round Table on the Environment and economy (NRTEE) was shut down in 2013, it declared: "The NRTEE has always maintained its focus on the integration of the environment and the economy with the belief that collectively we are smart enough to have both a productive environment and a prosperous economy" (NRTEE 2013, p11). Thus, the mainstream view of the environment and the economy remained pro-growth throughout the neoliberal globalization era, and relied on aspirations for a disembedded knowledge-based economy.

In sum, the settled time from 1982-2008 was dominated by neoliberal globalization, which presupposed much of the growth-based consumer culture of the post-WWII period. Canadian environmental policy was layered upon and has evolved within this dominant system.

In particular, the compatibility between economic growth and environmental protection was largely presupposed. As further detailed in Chapter 8, Canadian environmental policy has been progressively selected for so that it is compatible with and reflects the dominant system. As a result, attempts to establish transformative environmental approaches have been overwhelmingly selected against, so that what remains are diluted approaches and inaction.

6. Polarization, populism, and deep fissures (2008 – 2017)

Since the 2008-2009 global financial crisis, Canada may again have entered an unsettled time. There is evidence that destabilizing forces and crises have persisted, are unlikely to abate without significant changes, and may very well escalate. Globally, there has been a sequence of persistent and intersecting destabilizing forces. The 2008-2009 global financial crisis was felt around the world, notably through the United States subprime mortgage crisis and the European debt crisis. This was followed in 2011 by the Occupy Wall Street movement. Meanwhile, the Arab Spring began in 2010, accompanied by the Syrian civil war and refugee crisis. Recently, Trumpism and the global rise of populism have emerged and been linked to climate opposition through movements such as the yellow vests in France and Canada.

These events have destabilized Canadian life and politics, and driven the societal sentiment that existing solutions are insufficient. The 2008-2009 financial crisis was felt across the country, reverberating through the 2010-2012 Canadian auto crisis. The collapse of global oil prices made tar sands increasingly uneconomic, driving significant job losses and decline in the energy sector in the Canada's Western provinces, especially 2014-2016. Meanwhile, the Syrian civil war drove refugees to immigrate to Canada, driving populist backlash, while climate change has become an increasingly urgent issue, and will only become worse. And this is only one dimension of the global ecological crisis.

These persistent global and domestic destabilizing forces have maintained a general sentiment that previously established solutions are no longer sufficient, and there is some evidence of increasing escalation and excavation. Following the 2008-2009 financial crisis, the conventional wisdom of neoliberal globalization appears obsolete, no longer able to address the problems of the day. Core tenets of neoliberalism have been challenged and rejected, including open markets, the ideal of the minimal state, privatization, deficit reduction, and free trade (Ostry

et al. 2016). In 2015, Canadian Prime Minister Justin Trudeau challenged conventional wisdom about deficits and won on a platform of deficit spending.

Even still, although economic growth and reducing greenhouse gas emissions are incompatible, the idea that they are compatible remains unquestioned common sense. If we have entered an unsettled time, it remains unclear what destabilizing and excavating forces can be brought together to make Canada's economy more ecological, and whether the deeply anti-ecological elements such as economic growth can be challenged, excavated and replaced.

Synthesis: a coevolutionary explanation for the story of growth in Canadian politics

The story of economic growth in Canadian federal politics can be understood as the establishment of an element in the dominant system, coevolving over time through a sequence of settled and unsettled times. In brief, this sequence of settled and unsettled times and their dynamics amount to the historical sequence of events that produce the phenomena, the persistence of growth, as follows:

1. During the settled time of the National Integrity and National Policy eras 1867-1929, economic growth was unarticulated and was not part of the dominant system. The dominant system in Canadian politics emerged from colonialism and confederation, with new layers of the National Integrity and National Policy eras added upon existing layers, to become sedimented and entrenched in that system. Growth may have occurred, but was not explicitly pursued and thus remained an ontological propensity.
2. Then, shifts in society, material ways of life, and international relations during the unsettled time from the Great Depression until WWII (1929-1945) undermined the foundations of the National Policy. Much of the National Policy was discarded, although more deeply sedimented features of the National Integrity and National Policy eras were retained. In the drive towards WWII production, the nation state became responsible for delivering full employment through full production. This drive established the precursors to growth and the conditions that would drive growthmania in the subsequent period.
3. The end of WWII brought a shift from an unsettled to a settled time, anchored in a new international order, the Canadian White Paper on Employment and Income, and the vision of post-WWII reconstruction and development. During this period (1945-1970), growth quickly became established, sedimented, and entrenched in the dominant system. Growth was linked

to employment and the role of the state, but also to the emerging welfare state programs and national unity tensions. Driven by post-WWII cold war competition and optimism as well as fear of fascism, by the end of the 1960s, economic growth had become sedimented and entrenched in the dominant system. Growthmania reigned supreme.

4. The period from 1970 until 1982 was an unsettled time that can be understood as a key coevolutionary selection moment. Although environmental critiques of economic growth were initially considered, they encountered systemic constraints of the dominant system as that system entered an unsettled time. A series of crises and destabilizing forces drove Canada into and maintained an unsettled time. Growth was contested at the ideological level, but destabilizing forces drove the system towards pursuing and further entrenching rather than excavating and rejecting growth. Environmental ideas about limiting growth were selected against, while growth was selected for. Thus, during the 1970s, growth was only superficially questioned, but was not excavated.
5. From 1982 until 2008, neoliberal globalization was a settled time during which growth was presupposed and further entrenched. Neoliberal policies, including free trade, deficit reduction, and the turn away from the welfare state were anchored in and legitimated by the MacDonald Commission, economists, and business interests. This new macroeconomic paradigm was layered upon and presupposed economic growth and much of the previously established system. Growth had become deeply entrenched in the system. Moreover, consensus on sustainable development – that economic growth and environmental protection were compatible – provided the substrate that enabled environmental elements to be layered upon and integrated into the dominant system.
6. Since the 2008-2009 global financial crisis, Canada may again have entered an unsettled time. Persistent global and domestic destabilizing forces have maintained a general sentiment that previously established solutions are no longer sufficient, and there is some evidence of increasing escalation and excavation. Yet if we are in an unsettled time, it remains unclear what forces will come together and whether the deeply anti-ecological growth-based elements can be excavated and replaced.

Table 6.2. Historical periods, events, and explanation for growth in Canada 1867-2017

Period	Events in Canada	Coevolutionary explanation
1. Unknowing growth I: National Integrity (1867-1878)		
Settled time	Extensive growth: • Expand territory • Immigration, settlement • Develop wild lands	Growth is an ontological propensity; one possibility but not inherent or natural
2. Unknowing growth II: National Policy (1878-1929)		
Settled time	Extensive to intensive growth under National Policy Export-based production Ally with British Empire Infrastructure development Industrialization	National Policy layered on National Integrity Sedimentation of National Policy • National Policy was explicit, normative • Institutionalized interdependence of agriculture and industry • Materialization through railways, settlement, cultivation, industry
2. Foundations of growth: Great Depression – WWII (1929-1945)		
Unsettled time	Great depression, unemployment Unemployment escalates WWII reorganization of the economy	Escalation and excavation of National Policy Co-evolutionary selection: • Government responsible for ensuring employment • WWII increases production • Full production creates jobs • State pursues full production
3. Establishing, sedimenting, and entrenching growth (1945-1970)		
Settled time	Intensive growth explicit C.D. Howe White Paper on employment & income SNA measure GDP (1952) Growth emerged and adopted with reservations Growth increasingly used, became an end in itself and a primary objective	Post-WWII reconstruction layered on National Integrity, National Policy: • New role of state anchored by White Paper Growth established, sedimented: • GDP statistics developed • Growth strategy pioneered • Growth institutionalized, materialized in Post-WWII development & welfare state Growth linked, layered upon, and integrated: • As means to welfare state • Appeases national unity tensions through shared cost programs Feedbacks established: • Promising growth leads to political success

4. Growing pains (1970-1982)		
Unsettled time	Environmental limits considered Stagflation emerges 1972 minority government Persistent crises: • 1973 OPEC crisis • 1975 wage & price controls • Energy subsidies and regional differences • High deficit created • 1980-5 National Energy Program	System constraint: • Contestation: growth and the environment • Phillips curve (PC) constrains options • Minority government forced to pursue growth Escalation and excavation: • Challenge conventional wisdom of PC • Wage & price controls adopted • National unity undermined by energy policy Further entrenchment: • Shared cost program linked to GDP (1977) • Fossil fuel development
5. Renewed growth in a time of neoliberal globalization (1982-2008)		
Settled time	MacDonald Commission Neoliberal globalization: • Free trade established • Deficit reduction • Knowledge economy Brundtland Commission	Neoliberalism layered on Post-WWII growth: • New economic orientation anchored by MacDonald Commission Neoliberalism layered on growth; sedimented: • Neoliberalism and knowledge-based economy presuppose growth • Idea that growth and environment are compatible institutionalized (i.e. in NRTEE)
6. Polarization, populism, and deep fissures (2008-2017)		
Unsettled time?	2008-2009 financial crisis 2010-2012 auto crisis 2014-2016 oil sands collapse The rise of populism	Destabilization and escalation: • Carbon pricing politicized • Economy-environment debate polarized Increasing excavation: • Free trade, deficits, neoliberalism questioned

To sum up, economic growth has become deeply integrated and entrenched in the dominant system (Table 6.2). The dominance of economic growth was only questioned and challenged during the unsettled time of the 1970s. This excavation was insufficiently deep, even while destabilizing forces favoured growth. Rather than being deep, this remained superficial, at the level of ideological contestation. Since the 1970s, the entirety of environmental governance has developed and evolved in relation to and has presupposed that economic growth and environmental protection are compatible, anchored in neoliberalism and the compromise of sustainable development. However, the current period may be an unsettled time, providing opportunities for deeper excavation and change.

Explaining specific features of the paradox of growth

The coevolutionary explanation provides insights about the paradox of growth in Canadian politics. The paradox has three main features that warrant explanation: the changing, multi-dimensional nature of growth; the surprising outcome of the 1970s; and the contradictory and seemingly irrational positions of political parties since the 1970s.

First, this coevolutionary explanation accounts for the evolving character and the multi-dimensional nature of growth. Chapter 4 showed how economic growth evolved to have multiple dimensions: first, it occurred but was unmentioned; then, it was pioneered and contested, but gained consensus; it was linked to achieving other objectives; it was then treated as a panacea; it was seen as normatively good; and finally it was a structural constraint. My coevolutionary framework explains this evolution as growth being increasingly embedded and entrenched in the dominant system. Growth evolved from an ontological propensity 1867-1929, towards being increasingly established and sedimented in the dominant system during the post-WWII period 1945-1970, to finally echoing back as the way things are – a seemingly "inherent" feature of the dominant system during neoliberal globalization 1982-2008. Sedimented and entrenched, economic growth is a multi-dimensional feature of the dominant system: it is simultaneously part of the dominant belief system, an institutionally embedded feature, and a material and energetically observable feature of Canada's economy.

Since growth occurred and was measured before it was adopted as a policy and subsequently became institutionalized, this can be explained through a co-constructivist lens better than by either materialism or social constructivism. The coevolutionary explanation fits with, and indeed predicts, the evolving pattern of growth. According to a co-constructivist explanation, growth was an ontological propensity or possibility of the system, but did not become a dominant element of political discussions until a way to conceptualize and measure growth was developed. Initially, growth was an ontological propensity, one possible option that occurred even though it was not explicitly conceived or pursued. Once growth was conceived of as something that could be created through industrial production, measured through GDP, and seen as normatively desirable, the propensity for growth was built upon and amplified through human processes of idealization, institutionalization, and embedding in material processes. In other words, through sedimentation, growth was increasingly embedded in the conceptual,

institutional and material levels of the system. It thus became co-constructed such that the non-human propensity was built upon and reinforced through human action.

The taken-for-granted nature that growth acquired from the late 1960s onwards can be explained by the its multi-dimensional embedding, and echoing back as an ontological reality. Before it was established and entrenched, economic growth was something that happened. However, by the late 1960s it had become embedded and entrenched in the system. As a co-constructed reality of the system, it echoed back and was perceived as "the way things are" by those unaware of its historical origins.

The normative nature of growth can be explained as its structural linking with other elements. In the 1950s and 1960s growth was linked with many dimensions of social well-being that are valued in Liberal society: employment, welfare state programs such as healthcare and education, pensions, social services, national unity, and Canada's economic security and stability within the global economic system. If economic growth is viewed as part of our dominant belief system, it has become part of a constellation of concepts, many of which have strong positive emotional charge. Growth is both positive by multiple associations, and holds a positive emotional charge itself.

Second, this coevolutionary explanation accounts for the surprising outcome of the 1970s as an unsettled time in which growth was selected for whereas deep environmental challenges to the status quo were selected against. The coevolutionary explanation presented here explicitly accounts for the questioning and challenging of economic growth, as well as the doubling down on growth in a critical unsettled time. Although economic growth was initially questioned, the destabilizing forces, systemic constraints, and actions of key groups and individuals came together in ways that reinforced rather than challenged and excavated economic growth as a primary policy objective of Canada as a nation state. The further pursuit of growth by the end of the 1970s can be explained as the further entrenchment of growth in response to destabilizing forces and structural constraints.

This analysis suggests that in the 1970s excavation was insufficient to challenge growth on environmental grounds, or excavation occurred but was in the wrong direction. The coevolutionary explanation emphasizes that what is important is not only the distinction between settled and unsettled times; the depth and nature of the destabilizing forces also matter. During the 1970s, economic growth was initially challenged, but only at the superficial ideological level

through contestation. Instead of environmental goals, this period was driven by underlying economic shifts and instabilities, such that environmental policies that reflected critiques of growth were unsuccessful. Thus, while economic growth and the environment were contested, little excavation occurred on this front. Rather than growth-based elements, what was excavated was the post-WWII compromise between capital and labour, the dominance of the state and its role in delivering welfare state programs, and the international economic order.

Third, this coevolutionary explanation provides preliminary insight into the contradictory and seemingly irrational positions of political parties since the 1970s. The period since the 1970s can be explained as the continued coevolution of the system within the constraints of the dominant system in a settled time. The contradictory positions of different parties and the attrition of parties towards a position that economic growth and environmental protection are compatible can be understood as the coercive force of the entrenched and systematized reality of growth, and the selective pressures of electoral politics. On one hand, parties and public servants were not unaware of debates challenging growth. Their behaviour can be explained as politicians and parties learning and making decisions based on political rationales. From a political rationale, in the settled time of neoliberal globalization, economic growth was entrenched common sense. It was not something politically viable to challenge, given the pro-growth consensus on sustainable development. On the other hand, and in tandem with this process, as politicians and public servants knowledgeable of these critiques were replaced and new people encountered a situation in which those deep critiques were not articulated, those critiques were not learned by new generations and were lost. Thus, we observed two mutually reinforcing processes: actors were structurally constrained so that alternatives to growth were politically deterred; and new generations experienced pro-growth ideas as unquestioned common sense, leading to the perception that that was the way things are.

Conclusion

This chapter demonstrated a novel coevolutionary explanation for the persistence of economic growth as the establishment and entrenchment of an element in a complex system, evolving through a sequence of settled and unsettled times. This sequence of settled and unsettled times and their dynamics amount to the historical sequence of events that produce the phenomena, the persistence of growth. In the Canadian case, my proposed coevolutionary

explanation fits the historical evidence better than alternative explanations. It accounts for the changing and multi-dimensional nature of growth as the establishment and entrenchment of an element in a complex system. It explains the 1970s as an unsettled time with distinct dynamics whereby economic growth was challenged, but ultimately further entrenched rather than excavated. And the period since 1982 is explained as a settled time in which growth has been layered upon and further entrenched. Whether we are again in an unsettled time, only time will tell.

Chapter 7: Environmental aspirations in an unsettled time

P.E. Trudeau, the Club of Rome and Canadian environmental politics in the 1970s

The 1970s were a tumultuous time in Canadian federal politics. Following the Trudeaumania of 1968, politics remained energized with the figure of Pierre Elliott Trudeau, while the economy, energy, and national unity were dominant concerns. The economy was troubled with persistent stagflation, then the addition of wage and price controls and deficits. Energy policy was punctuated with two OPEC crises, PetroCanada, nationalist policy of the Foreign Investment Review Agency (FIRA), and the polarizing influence of the 1980 National Energy Program (NEP). And throughout the 1970s, national unity raised its head during the 1970 October Crisis, through Western alienation, with the 1976 election of the Partie Quebecois under Jacques Pariseau, and as the Quebec referendum in 1980. These are the issues that have captivated attention.

Much less is known about Canadian environmental politics in the 1970s. Literature typically presents the 1970s as the beginning of Canadian environmental governance, and provides only a cursory overview of this period. Environmental ambition is presented as fleeting, waning after the enthusiasm of the 1960s faded (Doern and Conway 1994). Doern, Auld and Stoney argue that the Trudeau regime "did not systematically attend to environmental policy and governance" (2015, p57). Rather, they claim that under P.E. Trudeau the 1970s had promising environmental beginnings but the effectiveness of environmental policy experienced a long decline. As such, the ideas and policies are often treated as nascent, with little to be explained.

The few studies that have looked more closely at Canadian environmental politics in the 1970s reveal a surprising depth of thinking and strength of initiatives, as early as P.E Trudeau's first term 1968-1972 but enduring throughout the decade. For instance, Trudeau met with the Club of Rome at least three times before the Department of the Environment (DOE) was created in 1971 (Doern and Conway 1994), and the Trudeau administration initially attempted to implement a systems approach with the DOE (Churchill 2006). Trudeau was actively involved in these early debates about the DOE's mandate (Doern, Auld and Stoney 2015). Shortly after the creation of the DOE, the Science Council of Canada developed the idea of the Conserver Society. The result was the largest federal investment in renewable energy to date (Trim 2015).

Moreover, first hand accounts from that period indicate that the Trudeau administration held environmental views that deeply challenged the status quo. Former Liberal Minister of Environment John Roberts viewed the Mulroney government's adoption of sustainable development as a setback and dilution of environmental ambition when compared to the Trudeau years (Roberts 1990, p176). How can we reconcile this transformative perspective and early ambition with the disappointing and relatively anti-ecological outcome of the 1970s? Why did relatively few of these ideas survive the 1970s? And why are there relatively few enduring changes that reflect these ideals?

This chapter examines Canadian ideas and policy on the economy, the environment and their relationship from 1968 – 1982 to illuminate the political drivers and rationales that unfolded during this period. To understand the subtleties of the political constraints and opportunities available to Canadian politicians, this period is viewed through the lens of an unsettled time. Using extensive archival sources, as well as interviews and other supporting documents, I present a detailed account of environmental and economic ideas, policies, and actions in Canadian federal politics 1968-1982. This account demonstrates that political leaders were not unaware of or naive about environmental issues. Rather, they engaged deeply with and possessed substantial and nuanced understandings of the issues and environmental critiques. This analysis reveals persistent efforts to pursue a deeply transformative environmental agenda that included a systems approach, rejection of economic growth in favour of an alternative systems approach reflecting an ecological view of net human benefit, and a societal shift in worldview and values from consumerism and greed towards sufficiency and well-being. At the same time, this analysis reveals distinct political dynamics and rationales that constrained and led to the ultimate failure of these environmental aspirations.

Canadian politics 1970-1982 as an unsettled time

Unsettled times are critical periods in history that offer potential risks, but also potential opportunities in which society-nature relationships may be more easily formed, reinforced, questioned, or changed. In settled times, established ideas, institutions and ways of life are largely seen as addressing society's problems, whereas the idea of unsettled times captures the general societal feeling that commonly accepted ideas, institutions and ways of life are unable to address the problems at hand (Swidler 1986). This distinction is useful because, while in settled

times the way we do things can be largely taken for granted, the idea of unsettled times captures the general sense that society cannot keep going as it was. Hence, the widespread perception that something has "gone wrong" characterizes unsettled times (Goldstone 1991, p409).

In settled times, processes of multi-dimensional embedding, sedimentation, layering, entrenchment, and reproduction dominate. Elements are established and embedded through multi-dimensional processes of co-construction involving diverse processes. This tends to follow a general progression from the most superficial level towards increasing embeddedness in deeper levels called sedimentation. Much is taken for granted common sense.

In contrast, in unsettled times dynamics may be more complex and are certainly less well understood. Unsettled times may be driven and maintained by a combination of endogenous and exogenous destabilizing forces acting in tandem. If unsettled times are characterized by a general societal sense that established strategies are inadequate to address society's problems, a problem-solution logic dominates, with the search for solutions to destabilizing forces. This dynamic can be conceptualized as a shift from sedimentation towards excavation. In place of sedimentation and reproduction, destabilization, excavation, and disruption may dominate.

To provide insight into the complexities of the unsettled time 1970-1982, this chapter draws on diverse sources of data, including semi-structured interviews and document review. Semi-structured interviews were conducted between September 2018 and April 2019 with key informants involved in Canadian economic and the environmental policy in the 1970s. Research participants were recruited based on their current or past participation in Canadian federal policy-making related to the economy and the environment. Participants included current and former politicians and senior public servants, NGO representatives, and academics. Research participants were recruited by email and phone using publicly available contact information and invited to participate in the study. Interviews explored interviewee perspectives and experiences related to the historical evolution and present federal government approach to economic and environmental policy. Interviews were conducted in-person or by phone, and lasted 1-2 hours. Interviews were recorded with interviewees' consent. Interviews were transcribed verbatim. Follow-up interviews were conducted as needed.

Document review provided a second data source. Key documents included archival documents; budget speeches; throne speeches; party election platforms; reports from the Government of Canada, specific ministries, NGOs, political parties, environmental groups; and

news articles. Archival sources included documents from Library and Archives Canada (LAC) and the Policy Advisory Committee to Robert Lorne Stanfield fonds (1963-1975) (PAC) in the Trent University Archives. Interview transcripts and documents were coded for themes and analyzed using QSR NVivo12. Analysis involved the integration and evaluation of data through an iterative process informed by the literature, interviews, and document review.

Early environmental aspirations: Canadian environmental politics 1968-1972

The stars aligned in Canada to favour the environment in the early 1970s. The environmental movement had emerged in the 1950s and 1960s. In 1968, Pierre Elliott Trudeau was elected on the political ideal of participatory democracy and for the first time each party was given a budget for policy research (Marsden 1990 in Axworthy and Trudeau 1990). As the 1970s began, leaders from the three major Canadian political parties were all deeply reflectful and oriented towards developing good policy rather than partisan politics and ideology. Trudeaumania provided the Liberals with the initial enthusiasm and confidence to try out bold new ideas and P.E. Trudeau, called the philosopher king, was an intellectual prone to engaging with ambitious and idealistic proposals. It is not surprising that, as Doern and Conway (1994) argue, from 1970-1975 the environment enjoyed initial enthusiasm.

Trudeau and the Club of Rome: from the Problematique and systems thinking to Limits

From 1969 until at least the late-1970s, there was ongoing communication with the Club of Rome, support for their activities, and consideration of their ideas by senior levels of the federal government, including Prime Minister Pierre Elliott Trudeau, the Prime Minister's Office (PMO), the Privy Council Office (PCO), members of the Liberal cabinet, senators, and the Governor General. On June 15-16, 1969, founding members of the Club of Rome including Aurelio Peccei and Alexander King first met with Prime Minister P.E. Trudeau and members of the Canadian government. This meeting included members of the PMO, the PCO, and senators, and on June 16, 1969 an informal dinner included Prime Minister P.E. Trudeau. These meetings discussed global problems and the urgent need for a systematic approach. The Club of Rome argued for the need to understand these problems through forecasting and systems analysis. Framed by Peccei as needing an "Act of political will" from the beginning, the Club of Rome

emphasized the importance of the institutional framework and political nature of these problems (Peccei 1969, p6).

At that meeting Peccei specifically requested Canada's political leadership and financial support. A Memorandum for the Prime Minister about these meetings states,

> Peccei made it clear that he and his colleagues were seeking a political initiative to create such a group. One country would take the lead and gain the moral and financial support of several others in its creation. The "super powers" would be unable to take this initiative for a variety of reasons, [...]. Peccei gave a number of reasons why he believes that Canada is the optimum choice for a country to take such initiative (Whitehead 1969, p2).

Peccei proposed that Canada approach one or two other countries to see if they were interested in co-sponsoring the work, emphasizing Canadian leadership: "He proposed unequivocally that Canada take the primary initiative" (ibid, p2).

Canada did not initially reject the Club of Rome's proposal, but was in favour of it. The Club of Rome's proposal and this specific request were given consideration at the highest levels of government. A Memorandum for the Prime Minister, recommends that Canada either accept the challenge to provide the "act of political will" or agree to participate but leave the initiative to another country (ibid, p2). Similarly, in a Memorandum for Mr. Lalonde (Principal Secretary for the Prime Minister) from J.M. Davey (Program Secretary to the PM), Davey recommended support rather than rejection:

> I believe that we should not reject out of hand the opportunity in participating in the initiative of the Club de Rome. I believe that the problems proposed are real and the time scale realistic. [...] I also feel that this is the type of imaginative approach that fits very well with the nature and style of the current administration. I therefore recommend that our minimum action should be Canadian membership (membership crossed out and replaced with observership) in the Club of Rome. This should not necessarily be immediate but should follow a more thorough study of the question.... At a later stage we would be able to further reassess the question and see if our participation should be larger. I would not like to see us close the door to this avenue of initiative (Davey 1969, p1-2).

P.E. Trudeau's government continued to engage with and support the Club of Rome's activities. On January 5, 1970, a second meeting was held between members of the Club or Rome, the PMO, P.E. Trudeau and other senior Liberals including future Prime Minister Jean Chretien.

The Montebello meeting of the Club of Rome

On April 6, 1971, a third meeting occurred when the P.E. Trudeau government sponsored the Club of Rome's second full meeting in Montebello, Québec. Members of Trudeau's cabinet, the PMO, the PCO, and the Governor General of Canada attended the meeting. At this meeting, preliminary results of the Club of Rome's modelling project were presented and discussed (Churchill 2006). It was at this meeting that the concept of limits to growth was first conceived and discussed (Meadows 1991). However, the systems-based environmental critique of economic growth was not understood by most participants, even by most members of the Club of Rome. As Donella Meadows described, "The Club members listened politely, spoke kind words, and then went back to their discussion of the world's problems as if each was unrelated to all the others, and as if there were no limits. As they took up each problem, they called upon growth to solve it" (Meadows, 2001). Dennis Meadows confirms, "The participants, just DID NOT GET the message" (personal communication). This difficulty in communicating the idea of limits was not a chance occurrence, but was widespread: "what we had witnessed at Montebello was a small example of what we were about to encounter all over the world - the inability of people to hear a message that questions one of their deepest assumptions. [...] Clear presentation was not our problem" (Meadows 2001).

The Science Council of Canada and The Conserver Society

A second inspiration for environmental ideas was the Science Council of Canada (SCC). The initial environmental focus in Canada was on pollution and was piecemeal; it was clear that a comprehensive approach was required (Roberts 1990). In the 1960s and early 1970s the Science Council of Canada produced a series of reports on the implications of economic growth. As former Minister of the Environment John Roberts recalls, these reports contended that "escalating growth, far from being a sure route to prosperity, was a potential disaster" (1990, p151). Hence, "[t]he pursuit of growth would have to be tempered by an increasing awareness of its consequences" and recognition that human activities were embedded in the Earth's systems

(ibid, p151). As a result of these reports, Roberts emphasizes that escalating growth came to be seen not as the "sure route to prosperity", but as "a potential disaster" (1990, p151). Motivated by the desire for a holistic policy approach, the Science Council of Canada (SCC) began developing the idea of a Conserver society in early 1973. The Conserver Society focused on two approaches to improve Canada's environmental prospects: education towards efficiency and conservation; and an industrial strategy to shift from long-term reliance on economic growth and resource extraction towards renewable resources (Trim 2015). The Conserver Society was a logical extension and way of implementing policy that reflected environmental of critiques of growth.

A radical environmental vision: systems thinking, questioning growth, and societal values

Up until 1970, the Club of Rome had only articulated their focus as three points: long-term focus, global problems, and the Problematique as a complex of interconnected problems (King 2006). Even still, these early interactions between the Club of Rome and the Trudeau government had clear influence on Canadian thinking and policy. They reflected a deeply transformative shift from the dominant way of thinking towards a new perspective characterized by an integrated systems thinking approach, a critique of economic growth that informed the need to reconcile the economy-environment relationship, and the need for much broader societal efforts and shifts in values from a focus on greed, consumerism, material progress towards sufficiency and wellbeing.

Organizational change and the Department of the Environment

P.E. Trudeau was enamoured by systems thinking, and along with senior bureaucrat Michael Pitfield sought to implement these principles through government reforms. Inspired by initial meetings with the Club of Rome, Trudeau encouraged proposals for a comprehensive Department of the Environment (DOE) mandate as an ecosystem manager that would challenge economic planning assumptions and add the "missing ecological feedback loop" (Doern and Conway 1994, p18). The DOE would serve this feedback function on decisions and activities of other government departments, and ideally have real impact on decision-making of cabinet and the federal government. According to Trudeau, the new ministry would "take a broad ecological

perspective in the discharge of his responsibilities, and in particular to take the lead in the enhancement of the quality of our environment" (Trudeau 1970a, p35).

However, for Trudeau the environment was not a separate problem to be dealt with by an isolated ministry, but a systemic problem and requiring society-wide efforts. Trudeau emphasized that the government organization act "will not result in the creation of a super agency to be responsible for all matters relating to the environment. The fight against the pollution of our environment is far beyond the capacity of one minister and his department. Indeed, it cannot be waged effectively by the federal government alone.... It is a fight that must be waged by all ministers, all governments and all people" (Trudeau 1970a, p35). Hence, as initially envisioned, the environment would be an overarching objective, underlying and running through all departments. Addressing environmental problems required all departments to cooperate.

The Trudeau government's support for environmental issues and the Problematique were not only reflected in the DOE, but also the creation of the Ministry of State for Science and Technology (MOSST) and the Ministry of State for Urban Affairs (MSUA). Elaborating on his speech from the throne, on October 24, 1969 Trudeau emphasized that tackling environmental problems required directly targeting technology and urbanization: "We intend to tackle the problem of environment, not only in the Northern regions but everywhere in Canada by directing our efforts mainly at the two major sources of pollution: urbanization and the invasion of modern technology" (Trudeau 1969, p40-41). For Trudeau, unplanned urbanization and the rampant use of technology were too often employed "to challenge [man's] own survival. In so doing he threatens not only his own species but also the whole life on our planet" (Trudeau 1969, p41). Trudeau's environmental concerns for the management of technology would to lead to the establishment of MOSST, while his concerns for urbanization were to lead to the creation of MSUA (Roberts 1990).

This systemic view of environmental problems led to a major government reorganization. On January 27, 1971 the Government Organization Act (Bill C-207) was tabled. It outlined the creation of the DOE, as well as two ministries of state: MOSST and MSUA. The Government Organization Act of 1970 proposed that the DOE should have an overarching mandate to influence other departments that impacted the environment.

Within this overarching view of environmental problems, the economy-environment relationship and the compatibility of economic growth with the environment were central themes discussed not only by the Prime Minister but also by Jack Davis, soon to be the first Minister of Environment. On January 27, 1971 Davis announced,

> Our new Department of the Environment is a resource management department. But it differs, in one very important respect, from other resource management departments. It deals with the animate. It deals with the living. It deals with the renewable. It is primarily biological in its orientation. It puts the emphasis on quality rather than quantity. [...] It must put ecology ahead of economics whenever a choice has to be made between the two. However, ecology and economics are not always opposed. We can have economic growth and a healthy environment, too. But to have maximum economic growth and a sound environment will take a lot of doing. It will take a lot of monitoring, a lot of careful planning; the best possible management plus considerable give and take on both sides (Davis, 1971, p2826-7).

These tensions between economic growth and the environment motivated the need to rethink economic growth as a primary policy objective:

> Economic growth in the old-fashioned, quantitative sense is an illusion. It is shortsighted. It is narrowly conceived. It recognizes certain private costs but ignores others. It passes hidden charges onto others. And these hidden charges can later turn up in the form of barren soil, smoke laden skies and waters which are repulsive to us all. A fuller accounting of the costs and benefits over the long run, inevitably turns up a different balance sheet. Blighted landscapes and unhappy hours are negative factors that must be taken into account (Davis 1971, p2827).

Thus, Liberal thinking and actions in the early 1970s explicitly took a systems approach that considered the relationship between economic growth and environmental protection, and the potential need to rethink growth at all costs.

Questioning economic growth and full employment in an increasingly unsettled time

These critiques of economic growth were not platitudes lost on Trudeau and his government. In the early 1970s, Trudeau and his inner circle publicly and repeatedly challenged the pursuit of economic growth on environmental grounds. Trudeau began to criticize gross

national product (GNP) and weave the idea of Net Human Benefit into his speeches. On May 2, 1971, Trudeau expressed concern about the rape of natural resources and "decried foolish worship of the gross national product" (Trudeau 1971, p2). Echoing the Club of Rome's critique of modern industrial economy, he described the impacts of technology and lure of material gain leading to processes "which we do not always understand, which may lead to disastrous consequences, and which may have cumulative effects" (ibid, p2). He emphasized that the government should pay attention to negative impacts of human activity such as pollution, resource exhaustion and the social cost of overcrowding, which could be better measured as "net human benefit" than GNP. Similarly, when Trudeau supported him at an all candidates meeting in Victoria, BC Liberal MP David Groos said he agreed with Trudeau "that nations should stop their reckless climbing for increasingly higher production and should replace the concept of gross national product with that of net human benefit" (Groos 1972).

This position was not hidden, but reiterated by Ivan Head, special assistant to Prime Minister Trudeau:

> The philosophy of unrestricted growth has been challenged by his government. Gross national product as the determining measurement of the health of a society has been called into question and "Net Human Benefit" has been suggested as a substitute, a measurement which would take into account such factors as environmental deterioration, community overcrowding and resource depletion (Head 1972, p242).

P.E. Trudeau's rejection of GNP and support for net human benefit was publicly known and supported by the Liberal party and administration. In 1972 Trudeau appointed Sylvia Ostry as the chief statistician for Statistics Canada to augment and improve national accounts so that they would include social welfare and capture environmental impacts of economic activity (McDowall 2008). Statistics Canada initiated a research group to look for ways to interrelate orthodox economic statistics with environmental indicators.

The Progressive Conservative Party of Canada and the environment

Both the Conservative and NDP parties were similarly critical of economic growth on environmental grounds. The Conservatives' 1972 and 1974 election platforms publicly questioned and challenged the merits of economic growth from an environmental perspective, calling for a shift to a Conserver Society. In 1972, they acknowledged that economic growth

contributed to environmental problems, declaring that "unplanned and unregulated economic growth" was leading to the "rapid deterioration" of the environment (Con 1972, p13-14). In 1974, the Conservatives argued that economic growth and quantitative progress did not mean a country was better off. Economic growth caused problems and should not be given the priority it had in the past. Economic metrics such as GNP and business interests were not to come before all other objectives. At the same time, the Conservatives also advocated for economic growth, but in both 1972 and 1974 economic growth was supported as one objective among others, all of which needed to be balanced for the common good.

Produced through the Stanfield-Symons policy process, Stanfield and the Conservative leadership were well aware of these policy statements, as well as the tensions between economic growth and the environment. In October 1969 the Conservatives held the Niagara Policy Conference, formally titled the Priorities for Canada Conference (McMillan 2011, p121-2). Shortly after, Robert Stanfield and his senior policy advisor Tom Symons developed an elaborate policy process based on consulting many stakeholders (McMillan 2016). The Stanfield-Symons policy process was unique, participatory, and collaborative. Both Stanfield and Symons were intimately involved in this process, knew about, and approved the policy proposals. Moreover, these tensions and debates were explicitly acknowledged. The Conservatives did not always agree on policies, and Stanfield, Symons and the policy committee were "well aware" of these contradictions (McMillan 2011, p136). Conservative policies were at times contradictory, but this was common and to be expected.

In at least one instance, the Conservatives explicitly recognized and debated the tensions between economic growth and the environment. A letter discussing the Conservative policy on economic growth dated July 20, 1971 states:

> Although on Page 16 it is stated "Economic growth must not be pursued at the expense of the quality of life of Canadians", nevertheless, it is quite obvious that the economic experts are completely committed to growth and more growth, even at a time when many of the best-informed people in the world are telling us that the earth is already overpopulated, that we are using up our natural resources much faster than they are being formed and that growth in population or industry must stop if life is to continue for more than a few more decades. Over half the world's population is at present undernourished, and yet we speak easily of using up more farm land for roads and airports. I realize that

> for many years our whole economy has been based upon inflation and expansion, but this must be changed if the human race is to survive. The young people seem to realize this better than many of the adults (Symons 1971, p1).

This letter, from Tom Symons (Stanfield's Senior policy advisor) to Tom McMillan (his 2nd policy advisor), shared feedback on the Conservative policy paper, Economic Growth Paper. The feedback was from Dr. Lawrence D. Cooper to Liam O'Brien (National Director of the Conservative Party).

This letter illustrates a number of important points: First, environmental critiques of growth were not niche in the sense that only a few unimportant, uninfluential people held them. Rather, four key Conservatives are named in this letter: Tom Symons (Stanfield's Senior policy advisor), Tom McMillan (his second policy advisor), Dr. Lawrence D. Cooper, and Liam O'Brien (the National Director of the Conservative Party). If we include Stanfield, who was aware of these debates (Clippingdale 2008, p63), this evidence suggests consensual support of these critiques rather than rejection and contestation of them in the Conservative party. Second, while economists supported economic growth, their ideas were not viewed as more legitimate than those who challenged growth. The letter questions the idea that the economy should be based on economic growth and inflation, but recognizes that in reality the whole economy was based on those ideas. Thus, the Conservatives explicitly encountered and viewed economic growth and inflation as elements entrenched in the system.

Likewise, although environmental issues were not at the top of the NDP's agenda, the NDP questioned GDP growth as an adequate measure of wellbeing. For instance, on November 25, 1970 NDP house leader Ed Broadbent criticized GDP as an inadequate measure of prosperity because it did not account for women's work in the home (McDowall 2008, p166). In sum, all three major Canadian political parties either explicitly or implicitly questioned and challenged economic growth as a measure of wellbeing in the early 1970s.

Challenging conventional wisdom in an increasingly unsettled time: 1968-1973

While the P.E. Trudeau administration held aspirations and acted on the environment in the early 1970s, these ideas and actions must also be understood within and in relation to the dominant thinking of the time. Economic problems became a dominant concern and destabilizing force throughout the 1970s and persisted into the early 1980s. In the early 1970s, stagflation –

the combination of stagnating economic growth, unemployment and inflation – emerged a persistent problem that evaded resolution. Chronic inflation plagued the Canadian economy in the late 1960s and early 1970s. Rising living costs were accompanied by rising unemployment rates, which, after 1970, remained consistently higher than in the post-WWII era, stoking fears of a return to the conditions of the 1930s (Riendeau 2007). Canada had entered an unsettled time.

The role of the state and the conventional wisdom of the Phillips curve

Until the 1970s, the state's responsibility to deliver full employment through economic growth had reigned supreme, but also the general view that growth was essentially good and could solve all society's problems. Built on this, conventional wisdom held that, according to the Phillips curve, inflation and unemployment were inversely related. As such, Keynesian macroeconomic management relied on balancing or trading off one against the other. Within the conventional wisdom that the economy was based on economic growth and inflation, and the trade-off of the Phillips curve, economics prescribed two main approaches. A combination of decreased taxation and fiscal stimulus was the medicine for a sluggish economy and high unemployment (Bothwell et al. 1989). In contrast, the solution to inflation was higher taxes and reduced government spending (Bothwell et al. 1989). According to the Phillips curve, in the short term addressing inflation would create unemployment and vice versa. Within this logic, economic growth and full employment were not seen as purely good, but also as having negative impacts, namely inflation.

In this context, political actors encountered structural constraints and system dynamics, and they attempted to navigate this unsettled time in relation to those structures and dynamics. From 1968 until 1972, Trudeau's Liberal government worked within the conventional wisdom of the Phillips curve, attempting to balance economic growth and employment against inflation. For instance, in the 1969 budget, the federal government struggled with this trade-off: "the very strength of the current expansion clearly aggravates the threat of intensified inflationary pressure, with all of its attendant evils" (Benson 1969, p2). Essentially, from 1968 until 1972 the Trudeau government attempted to limit economic growth to reduce inflation. Their economic objectives and environmental reservations about the merits of economic growth were aligned.

However, conventional assumptions based on the Phillips curve became increasingly untenable. From 1968 until 1972, economic growth continued, while inflation continued to

escalate, even while unemployment became an increasing problem. The combination of both rising inflation and unemployment that characterized stagflation contradicted the conventional wisdom of the Phillips curve and left parties at a loss. As Ed Broadbent confirms, stagflation "threw people off" because "there was supposed to be some trade-off between inflation and job growth and you were getting high inflation and high unemployment at the same time. And so there was intellectual problems of coming to grips with that, which was a serious issue" (Ed Broadbent interview). How the government should handle the economic crisis of stagflation was unclear, but it was increasingly clear that existing solutions were no longer up to the task.

Challenging conventional wisdom, the Prime Minister began to question the government responsibility for full employment, as well as the work ethic as a central societal ideal. A March 1971 report entitled *Governing in the 70's* and prepared by the Prime Minister's office for the Cabinet Committee on Planning and Priorities described the coming decade as a "period of transition" in which environmental conditions and economic changes such as automation, specialization and women entering the workforce would make the public expectation to reduce unemployment problematic (Davey 1971, p3). The report proposed that "the time has come to realize that it is more efficient to run our economy with a certain level of unemployment" and to "accept the responsibility" of its impacts. Although welfare addressed this in part, the problem was rooted in the work ethic. The report observed "fundamentally, the difficulty government faces" is that "a man without work is a man without dignity" (ibid, p9). The report suggested that government might lead this change in societal values, while helping transition through measures such as guaranteed annual income.

In 1972 unemployment spiked despite continued growth, and the Liberals reversed their strategy, prioritizing jobs and growth over inflation. In the May 1972 budget, Finance Minister John Turner declared jobs and growth the Liberals' first priority, but these had to be balanced against inflation (Turner 1972, p1).

Liberal vulnerability in minority government (1972-1973)

It was in this context that Canada approached the October 1972 federal election, which focused on economic issues. In response to spiralling inflation, persistent unemployment and a stagnating economy, all parties proposed solutions within the conventional wisdom. Each adopted a different position on how the economy should be managed in relation to the Phillips

curve: the Liberals promised jobs and economic growth; the Conservatives argued that these objectives must be balanced and pursued simultaneously; and the NDP argued that full employment should be prioritized, while the resulting inflation could be dealt with. Thus, parties jockeyed to find a solution within what was considered the legitimate role of the state and the conceptual constraints of the Phillips curve.

The 1972 election yielded a Liberal minority, and for the Liberals, pursuing growth became a matter not only of vulnerability, but also `of political survival. This was the closest election in Canadian history by number of seats, and after the Trudeaumania of 1968, the Liberal minority was seen by many as a Liberal defeat and a Conservative success. Some wondered whether P.E. Trudeau would resign. Within the Liberal party itself, the 1972 election resulted in a caucus retreat at Meech Lake, which was "a brutally candid examination of the PM" (Gillespie 1973, p1-2). Much weakened, Trudeau's Liberal minority remained propped up until July 1974 only with the support of the NDP.

Moreover, the NDP made its support conditional on its major policy positions. For instance, in December 1973 the NDP threatened to defeat the Liberal government if it did not make PetroCanada a publicly owned corporation (Broadbent interview). Former NDP caucus leader Ed Broadbent, who was responsible for communicating between the NDP caucus and the Liberal leadership, states "There was a clear causal connection" (Broadbent interview). In particular, a core NDP priority linked to their political identity and core constituency was the government's responsibility to deliver full employment. When asked about the NDP position on the trade-off between economic growth and jobs versus inflation, Ed Broadbent emphasized "Insofar as the trade-off between jobs and inflation, we were always on the side of somewhat more inflation could be accommodated if this resulted in more jobs" (Broadbent interview). Thus, from 1972-1974 the Liberal minority government was forced to pursue jobs and growth to maintain the NDP's support.

In sum, the early 1970s amounted to political problem-solving in search of ways to address stagflation. The Liberals encountered conventional wisdom, existing structures and entrenched elements, which politically deterred or constrained their ability to act on ideas that challenged the state's responsibility to deliver jobs and growth. While P.E. Trudeau and the Liberals challenged economic growth on environmental grounds through logical and moral arguments, as well as initial actions, existing structures and emerging crises constrained action

on those ideas, and would have meant a political defeat after the 1972 election because the NDP held the balance of power.

Changing structural dynamics and responses to ongoing crises 1973-1979

Then, as Canada moved into an increasingly unsettled time, everything changed. A series of crises and destabilizing forces drove the search for solutions to these problems. Federal politics escalated from parties simply attempting to find solutions in relation to conventional wisdom to managing crises in a rapidly evolving context. Often, proposed solutions challenged conventional wisdom. And often those solutions in turn had unintended consequences, exacerbating existing problems or creating problems of their own. Instead of addressing long-term environmental problems through systemic changes, destabilizing forces and structural constraints favoured issue-specific, and short-term political priorities such as energy development and the economic fixes.

Energy crises, energy security, energy independence

In late 1973, the OPEC oil crisis caused oil prices to rise dramatically, and compounded an already strained economic situation. As former Minister of Energy, Mines and Resources Alastair Gillespie recalls, "The oil crisis affected all parts of government, all Canadian governments and all governments of the world" (Gillespie and Sage 2009, p170). In response to the crisis, the federal government prioritized energy development as a means to energy independence and security. On December 6, 1973, P.E. Trudeau announced PetroCanada would be created. The government would build pipelines, develop the tar sands, create PetroCanada, and control prices so that Eastern Canada would use price-controlled oil (Bothwell et al. 1989, p346-7). That same year, parliament established the Foreign Investment Review Agency (FIRA) to ensure Canada's interests were protected. Governments were instrumental to incentivize high-risk exploration and supporting the development of oil sands. In 1975, the federal, Alberta and Ontario governments together put up $500 million to purchase 35 percent interest in Alberta's Syncrude oil sands plant and prevent its closure (Lalonde 1980 in Axworthy and Trudeau 1980).

The government's attempts to address the energy crises caused their own problems, exacerbating national unity tensions. The OPEC "oil cartel" was intended as a weapon used against the oil-dependent Western countries. Oil-producing countries would benefit from the

increases in the price, while oil-importing countries had to either adjust their consumption rates or borrow to maintain them in the face of increasing energy prices (Toye 2014). However, the Canadian Federal response was not so simple. Unlike many other countries, Canada did not fall neatly into one category or the other. Rather, Canadian production and use of oil was split: Western provinces produced and exported oil in excess of what they consumed, while the Eastern Atlantic provinces and Quebec were net importers.

The Federal government intervened to establish a nation-wide oil price, subsidize oil imports for Quebec and the Atlantic provinces, and maintain domestic oil prices below world levels (Bothwell et al. 1989). The effect of these policies was twofold. First, Federal attempts to manage the oil crisis in relation to these regional differences caused provincial resentment, exacerbated national unity tensions and drove Western Alienation. Attempts to manage energy issues caused federal-provincial conflicts because Western oil-producing provinces wanted world oil prices while Eastern oil-consuming provinces wanted lower prices. Second, Canada consumed more oil, imported more, and exported less than if prices had not been kept below world prices (Bothwell et al. 1989).

Stagflation and escalating economic whack-a-mole

Made worse by the energy crisis, ongoing economic issues evaded easy solution. In 1973, stagflation became even more pronounced, with both inflation and unemployment high. Inflation had risen steadily and wages had increased in an attempt to maintain gains or simply to catch up (Staudohar 1979). This inflationary spiral escalated, and was accompanied by increasing strikes. Stagflation presented an increasing trade-off between inflation and unemployment, which the Liberals were reluctant to make. Instead, they promised Canada could address both and argued that economic growth was the solution: "An expansion of output will contribute to the solution of both. The government, therefore, believes that in its own fiscal policy it should continue to impart stimulus to the expansion of employment and to the supply of goods and services" (Turner 1973, p8). Meanwhile, the Liberals pleaded to Canadians for voluntary restraint to halt the inflationary spiral.

The economic situation escalated, resulting in increasing excavation of established strategies and the introduction of novel proposals. Spiralling inflation, the Phillips curve, and proposals for wage and price controls is a case in point. In 1973 the Liberal government rejected

wage and price controls, arguing that this required public consensus and a crisis situation: "Controls would demand a far wider public consensus and more evidence of an emergency situation than is now the case" (Turner 1973, p8). A year later, the Liberals' May 1974 budget rejected both deflation and wage and price controls in favour of continued growth to increase supply, specific price controls, and helping Canadians with rising living costs. They argued, "The challenge facing the country is to break the inflationary spiral. But we must do this in ways that will not erode our prosperity nor damage our growth" (Turner 1974a, p1). The Liberals rejected anything that would threaten growth and jobs: "In our fight against inflation, I have rejected two possible approaches. One is the deflation of demand by severe measures of fiscal and monetary restraint. The effect of this would be stagnation and rising unemployment. In my judgment, such a cure would be worse than the disease" (Turner 1974a, p6). They also rejected wage and price controls (Turner 1974a, p6).

As the situation escalated, so did pressure to take action that rejected and excavated established strategies. The fragile Liberal minority was brought down in May 1974 when the NDP felt the Liberals were not adequately addressing inflation and the worsening conditions of Canadians. NDP leader David Lewis claimed the budget did not address social issues including pensions, the housing crisis, or equity and did "nothing to regain control of the Canadian economy" (Lewis 1974, p2109-2110). The 1974 election focused primarily on economic and energy issues. Robert Stanfield fumbled his proposal for a wage and price freeze, costing the Conservatives the election.

Under a new Liberal majority, inflation persisted so that the trade-off between jobs and growth versus inflation became even more stark. Still, the Liberal majority insisted that it could both address inflation and deliver jobs and growth. Ultimately the government appeared at the whim of the economy and not the other way around. By June 1975 Turner admitted the government was at a loss: "We are now faced with a dilemma. If we follow more expansionary policies at this time we run the risk of making inflation worse. If, on the other hand, we follow contractionary policies, we risk worsening unemployment" (Turner 1975, p1). From 1973 to 1975 Turner and the Liberal government "rejected, and rejects again, in the most categorical manner" a policy of "deliberately creating, by severe measures of fiscal and monetary restraint, whatever level of unemployment is required to bring inflation to an abrupt halt" (Turner 1975, p11). Turner described his reluctance to slow growth: "The cost would be much too high. The

hard won sense of security in our society would be replaced by a sense of fear and anxiety, and the cost in terms of lost output and lowered standards of living would be unacceptable. In human terms for me it would be unthinkable" (Turner 1975, p11). The imperative to deliver jobs and growth was deeply entrenched.

Seeking a better solution, the Liberals had held consultations across the country. Those talks had not produced the desired consensus, and in particular agreement of the labour unions. Without consensus the government was reluctant to impose wage and price controls: "we can resort to direct controls only when there is a public conviction of the need for such action. That point has not yet been reached" (Turner 1975, p5). Turner continued to call for voluntary restraint and turned to a policy of government restraint to lead by example. Still, stagflation persisted and in October 1975, shortly after having denounced price and wage controls during the 1974 election, the Liberals implemented them. Finance Minister John Turner resigned, to be replaced by Donald MacDonald. Wage and price controls were reluctantly but unanimously supported by the Liberal cabinet and implemented (Gillespie and Sage 2009). The Anti-Inflation Board would maintain wage and price controls from 1975 until 1978.

John Turner's resignation and the adoption of wage and price controls signalled a change in direction and set in motion a dramatic shift towards neoliberal globalization. Wage and price controls were maintained, but the combination of energy subsidies, increasing unemployment and economic decline resulted in increased government debt. The government's increasing deficit combined with concerns about economic growth and unemployment to drive a shift from wage and price controls to reducing the deficit. From 1977 to 1978, the government systematically cut taxes and increased spending "in the face of ever-widening budget deficit" (Bothwell 1989, p354). In 1977, the March budget attempted to stimulate economic growth and reduce unemployment, while maintaining wage and price controls of the AIB. Conversely, the April 1978 budget focused on reducing the deficit, claiming the growth of the 1970s had been squandered while increased spending had created deficits. It claimed Canada needed structural reform and energy development. Thus, from 1973 until 1979, the Liberals continued to search for solutions to economic and energy problems, even while those solutions created new problems.

Environmental aspirations in the context of stagflation and energy security 1973-1979

This combination of economic and energy crises, focus on short-term problems and the selective pressures of elections meant that environmental concerns were no longer urgent or a top priority. Even still, P.E. Trudeau and his government continued to entertain, publicly support, and pursue deeply transformative environmental ideas, albeit with increasing recognition of the limits of political leadership in the absence of societal support in the context of an unsettled time.

P.E. Trudeau in Salzburg

On February 4-5, 1974 Trudeau attended the Club of Rome's Salzburg Conference for Heads of State. The conference was a meeting between members of the Club of Rome and political leaders of ten countries (or their personal representatives) held February 4-5, 1974 in Salzburg, Austria. The meeting focused on the political aspects of addressing the Problematique, "that cluster of problems which confront society in all parts of the world and which are so intimately interrelated that to attack each in isolation can hardly provide comprehensive and durable solutions" (Peccei 1973, p1). The Problematique foregrounded Limits to Growth and the problem of GDP, noting the "dramatic growth of the world economy and the accumulation of wealth especially in industrialized countries" (ibid, p1-2). At Peccei's invitation, P.E. Trudeau attended the Salzburg meeting and signed the Salzburg Statement.

The 1974 Salzburg conference further illustrates the political sensitivity of these issues in the context of an increasingly unsettled time. Salzburg discussions were treated as private and politically sensitive. The purpose of the meeting was "to enable a number of leading statesmen of the world to discuss together, free from the constraints of normal intergovernmental consultation, the problems which, although affecting mankind's long-term future, need urgent consideration" (Peccei 1973, p1). Peccei described this meeting as an opportunity for heads of state to discuss "long-term trends of society or policy issues concerning the world as a whole" as opposed to immediate, short-term, and specific topics (ibid, p1). The Salzburg meeting was an opportunity for statesmen to consider these issues "quietly and freely among themselves" (ibid, p1). As Alexander King describes, "We realized that informality and real conversations could never take place in a large assembly open to all nations" (2006, p381). King continues, "The plan was for the meeting to take place behind closed doors with the media and ministers' civil servants excluded, with a press conference at the end" (King 2006, p382). Peccei assured Trudeau that all

Presidents and Prime Ministers were "coming in a personal capacity" (ibid, p1) and that discussions would remain private. He wrote, meetings "will be completely informal and private to make for the frankest possible exchange of views and ideas. There is no intention to produce concrete recommendations, nor will the debate be reported to the press" (ibid, p2).

P.E. Trudeau attended privately and considered his participation unofficial. Of his five international trips during 1974, Salzburg was the only one taken "unofficially" in combination with a family holiday in Switzerland (Butler and Carrier 1979). Moreover, Trudeau expressed concern for privacy. In the lead up to the Club or Rome's Salzburg Conference of Heads of State, Trudeau and his staff expressed concerns about public attention and a public declaration. A restricted telegram from Ivan Head (Special Assistant, Prime Minister's Office) to the Club of Rome states,

> PM is concerned that idea of a common declaration and attendant publicity could inspire attn and comment which could take away from value of mtg in addition to involving participants unwelcome exercise of reaching agreement. Grateful if you would contact Peccei immed and discover his precise intentions. You may indicate PMs interest in having this info (Head 1974a, p1).

Likewise, in a Memorandum for the Prime Minister from Ivan L. Head dated January 24, 1974, Head described two potential problems: Peccei's desire to have "a grand press conference" which he describes as an "ungovernable circus" and Peccei's proposal for a common declaration to influence world public opinion (Head 1974b, p1).

If economic growth was discussed or questioned in Salzburg, the meeting did not lead to a public critique or rejection of growth. The conference produced the Salzburg Statement of the Club of Rome (Club of Rome 1974), which articulated positions on limiting world population, the need for alternative sources of energy, global interdependence, peace, and The Problematique. Notably, the statement emphasized the need to limit population growth, but did not discuss or reject economic growth. Instead, it declared international cooperation "must aim at developing patterns of economic growth which minimize the demand for scarce materials and damage to the environment" (Club of Rome 1974, p264). Founding member of the Canadian Association of the Club of Rome, R.J. Whitehead, observed that heads of state

> were all convinced that their political survival was at stake if they initiated the measures that are essential for global survival. Some ministers might have been prepared to make

> that sacrifice except for the fact that their probable successors had less knowledge of global problems and were less sympathetic towards solutions than they were, so the situation would not be improved by their resignation (Whitehead, n.d.).

In particular, according to one account "Trudeau spoke at the end of the meeting to the effect that he certainly agreed with the critical nature of the issues identified, but if he, as prime minister, tried to implement the required action as identified by the group, he would be out of office at the next election-or before. And furthermore, if he were voted out of office, his successor would be faced with the same problem" (Thompson 1992, p111). The question of economic growth remained politically sensitive and did not surface publicly.

Environmental aspirations: a transformative vision and appeal for greater societal action

Shortly after Salzburg, P.E. Trudeau's cogently articulated his environmental views in a May 1974 speech, later reprinted in *World Order*. First, he emphasized the importance of recognizing limits:

> One need not be a neo-Malthusian, or a subscriber to any of the pessimistic theories now abounding, to have learned that there are limits to the rate at which the earth's resources can be exploited, that there are limits to the ability of our biosphere to absorb pollution, that there are limits to the capacity of the globe to support human life. These truths we now know and accept (Trudeau 1974, p6).

For Trudeau, this demanded responsibility and new values:

> This responsibility, in short, must be universal in concept and planetary in scope. It demands a great deal of every man and woman, but it falls with particular weight on the inhabitants and governments of the developed nations for we are the ones who have amassed the knowledge; we are the ones who possess the means to alter positively the course of human destiny (Trudeau 1974, p6-7).

He continued,

> This new maturity requires new values. Foremost among them is an acceptance that economic growth and material advantage are not goals to be isolated from the general aim of mankind. The twentieth-century devotion to material gain has created an imbalance in the human condition that infects the attitudes of all too many men and women and the policies of most governments. Economic criteria to the exclusion of

> almost all others are employed as the measurement of individual achievement and of governmental performance. “Prosperity” is the rallying cry of politicians everywhere. But what of happiness? What of contentment? What of satisfaction? Are we to believe that these are concomitants of economic growth? To anyone who has despaired at endless traffic jams, to anyone who has encountered the obscenity of unplanned urban sprawl, to anyone who grieves over the despoliation of oceans and beaches by needless oil spills-to any of these persons the answer must be no (Trudeau 1974, p10).

For Trudeau, this required a societal project beyond the scope and ability of politicians, implicating all of society: “No single political leader, no group of political leaders, is capable of changing the values and attitudes of a whole society” (Trudeau 1974, p10). Trudeau called on people to “expand our consciousness and our attitude, to reexamine our value system, to discount the worth of purely economic factors as an evaluation of the human condition” (ibid, p10). He also called for the measure and pursuit of Net Human Benefit, not Gross National Product.

The need for societal mobilization on the environment was neither limited to PM Trudeau nor disconnected from the Liberals’ economic thinking. While it foregrounded stagflation, the November 1974 federal budget also proposed that deep societal changes were needed that went beyond economics and the capacity of government leadership and control. In his budget speech Finance Minister John Turner emphasized that the country’s economic problems were linked with finite ecological limits:

> the sum total of all the claims on the nation's resources -- however justified they may seem to be -- clearly exceeds what is in fact available to be shared. No group is likely to succeed in getting the full share of the real national pie to which it feels entitled. So long as each continues to attempt to enforce its claim by pushing up its price, its wage, its interest rate or tax rate, the outcome can only be further inflation. We have to find a better way of reconciling the competing interests of the various groups which make up our society. No group need lose in this search. Indeed, if we succeed, all can gain because the over-all performance of the economy will be enhanced by controlling inflation. (Turner 1974, p10)

Turner targeted greed and unlimited consumption in the face of finite ecological limits, which required careful management of human affairs:

> As a result of the extraordinary progress made over the last several decades in developing food and energy, we came to regard them as relatively cheap and abundant. That has all changed in the space of a few short years. We have become painfully aware that our capacity to produce both these essentials is not unlimited. The growing scarcity of these resources compels us to husband them wisely (1974, p10).

Faced with ecological limits, the government felt compelled to move beyond economics and make an ethical appeal to Canadians:

> On a world scale, it is not just an economic problem. It is a moral issue, because for many people and for many countries it is survival which is at stake. Many countries haven't enough energy to meet the basic needs of their people. Millions of people haven't enough to eat. For Canadians this is not a question of economics; it is a matter of conscience. Should we live as high as we do? Should we waste as much as we do? Don't we have a duty to conserve energy? Don't we have an even greater duty to conserve food in a starving world? These aren't properly matters for a budget. But I do believe they are matters for the conscience and private conduct of 23 million Canadians (Turner 1974b, p10).

The inclusion of this statement in the budget speech emphasizes the importance the Trudeau government placed on the connections between the environment and the economy, and the need for a transformation in society and its values.

These examples demonstrate that, despite stagflation and energy crises, Canada's economic challenges were not seen as separate from environmental problems, but as intimately connected. Prime Minister P.E. Trudeau continued to denounce economic growth and advocate for a new vision of prosperity, although this demanded much broader societal support that rejected consumerism, greed, and fetishizing material progress, in favour of a new vision of well-being.

Environmental compromises in the context of stagflation and energy security

Within the government, broader actions on the environment also continued, but were framed as the need for energy conservation and renewable energy in the context of energy security and independence. The federal energy strategy appears to have been an all-of-the-above approach. Released in April 1976, *An Energy Strategy for Canada: Policies for Self-Reliance*

included not only oil and gas, but also nuclear energy, solar and biomass as means of energy development. Along with the development of energy resources, energy conservation and efficiency were also pursued to improve energy security. Energy development and energy conservation are mentioned in every federal budget from 1975-1980.

Likewise, the critique of economic growth and consumer society were not overshadowed by the energy crisis, but gave those ideas new focus. As former Minister of Environment John Roberts describes, "The oil crisis of 1973 brought home an understanding that cheap energy supplies, which fuelled the abundant growth of the West's consumer society, could not be relied upon, and reinforced predictions of such economists as Galbraith and Heilbroner, who warned that the affluent industrial world must abandon the practices of wasteful growth" (Roberts 1990, p149). Indeed, Canada's 1976 energy strategy included targets such as "reduce the average rate of growth of energy use in Canada, over the next ten years, to less than 3.5 percent per year" (Gillespie 2009, p179).

However, destabilizing forces and political responses drove the system in the opposite direction, towards pursuing and further entrenching growth rather than environmental initiatives. As described in Chapter 6, persistent economic troubles drove Trudeau's Liberals to renegotiate the federal-provincial shared cost program funding, linking federal contributions to GNP (Bothwell et al. 1989; Riendeau 2007), further entrenching growth by explicitly tying federal contributions to the cost-sharing program to economic growth.

Meanwhile, the oil crisis drove growth in energy development and consumption rather than conservation and efficiency. To their credit, the Trudeau government favoured conserver society policies into late 1970s. On July 4, 1978, Alastair Gillespie Minister of Energy, Mines and Resources announced a five-year renewable energy subsidy program. This was one of the largest pledges to renewable energy development in Canadian history. The program promised $380 million in subsidies for solar energy and biomass, and when research and joint federal-provincial funding were included the total would be approximately $600 million (Trim 2015). However, in the short term, energy development and conservation were favoured because they addressed energy shortages better than renewable energy development, whereas renewable energy was primarily a long-term strategy that did not fit with short-term crises and election cycles (Gillespie and Sage 2009). Gillespie's renewable energy programs would not last. Furthermore, despite rhetoric advocating energy independence through both energy development

and conservation, the outcome was increased growth in production and consumption rather than conserving and limiting use of energy.

Weathering the storm: 1979-1982

If the urgent crises and instabilities of the mid-1970s had subsided, their underlying tensions were not resolved. The impacts of earlier solutions continued to haunt the government in the form of the deficit, Western alienation, national unity tensions, and stagflation. The country was growing increasingly fatigued of Trudeau and on May 22, 1979 Joe Clark's Conservatives were elected by a thin minority on pro-growth promises to cut taxes and stimulate the economy (MacEachen 2009). The Conservative government would be short-lived. Once elected, the Conservatives faced economic realities of the country and attempted to back away from their promises. Although he had promised to stimulate growth, Clark's December 11, 1979 budget instead proposed fiscal restraint and deficit reduction designed to curb inflation by slowing economic activity (MacEachen 2009). Meanwhile, the 1979 Iranian revolution set off a second OPEC price shock that more than doubled crude oil prices in the span of several months, with effects that lasted into the 1980s. In response, the Conservative's budget proposed a gas tax of 4 cents per litre. Clark's government was defeated in the budget vote, and again in the federal election on February 18, 1980.

The 1980s began with a newly elected Liberal majority, again led by P.E. Trudeau. With the lingering energy crisis, the 1980 Quebec referendum, and the looming 1981-2 recession, economic, energy, and national unity concerns continued to dominate. Finance minister MacEachen described the situation in 1980:

> Only 10 years ago, the world was riding high on the long wave of postwar economic expansion. While inflation was beginning to creep up in many industrial countries, we all felt confident in our collective abilities to manage growth as the world economies expanded in concert. But ever since the oil crisis of 1973 industrial countries have had to struggle with the problems of inflation and stubbornly high rates of unemployment. In 1979 the world was shaken by a second major oil shock. For the industrial world this has meant a sharp renewal of inflationary forces and real income losses (MacEachen 1980, p1).

He reflected that the 1970s had been an unsettled time in which the conventional wisdom had been disproven:

> we have all learned that we cannot achieve full employment, stable prices and other economic goals simply by influencing the demands for goods and services by cutting taxes or by increasing government expenditure—or alternatively by raising taxes and cutting spending. The problems are obviously deeper and more complex, and they relate to our basic ability to produce (MacEachen 1980, p1-2).

This situation meant searching for deeper, longer-term solutions: "the problem is not a simple matter of ensuring an appropriate demand for goods and services but is more deep-seated. There are no quick solutions, so we will need to be patient and plan in a longer-term framework" (MacEachen 1980, p2-3).

The government remained at a loss, searching for solutions. The Liberals put forth a nationalist policy with resource-based industrial development as its core. Energy was its central focus. In the 1980s budget speech, Finance Minister MacEachen declared: "Perhaps the most critical area demanding an active government role is energy" (MacEachen 1980, p4). The October 28, 1980 budget, known as the energy budget, introduced the Liberals' National Energy Program (NEP). The NEP had three main foci: (1) energy security and independence from world markets, (2) equal opportunity to partake and benefit from the energy industry, and (3) a fair pricing and revenue-sharing scheme. Importantly, the NEP aimed to incentivize production and limit foreign ownership through a policy of 50% Canadian ownership of oil and gas production by 1990, Canadian control of a significant number of large oil and gas firms, and increased ownership by the Government of Canada. Conservation and renewable energy continued to be part of this thinking. For instance, the 1980 budget included energy conservation measures such as mandatory mileage standards for cars. And it announced that renewable energy programs would be stimulated through research and demonstration as well as a new crown corporation Enertech Canada (MacEachen 1980b, p9).

Economic, energy and national unity problems continued. World oil prices declined, interest rates rose and from 1981-1982 Canada entered the worst recession since the Great Depression (Bothwell et al. 1989). Overwhelmed with energy and constitutional issues, the Liberals failed to gain support for their Third National Policy and discarded its economic policies (Bradford 1999). Still searching for solutions, in 1982 Trudeau called for a Royal Commission

on the Economic Union and Development Prospects for Canada, the MacDonald Commission. With hard economic times and falling oil prices Gillespie's solar funding and renewable energy programs were cancelled in 1983 (Trim 2015).

Epilogue: outcomes and the expiration of transformative environmental policy

Transformative environmental initiatives and structural constraints

Throughout this unsettled time, the Liberals continually attempted to implement their transformative environmental vision by creating a DOE with overarching powers to limit environmental impacts, advocating for new measures of well-being that accounted for negative economic impacts on the environment, and funding renewable energy programs that would reduce the energy impact of Canadian activity. However, in the shifting situation of the 1970s, these continued attempts failed to gain traction or endure. All of the Trudeau government's transformative environmental attempts encountered systemic barriers best characterized as incompatibilities with the dominant system. If Trudeau's initial vision for the DOE was expansive, political support for this vision waned as he encountered overwhelming opposition from ministers and senior public servants from departments across the government (Doern and Conway 1994). The result was a DOE with a much more modest role, mandate and legislative authority. A systems approach was considered for the DOE (Churchill 2006), but ultimately it was created as a line department, siloed with the rest in contrast to the ministries of state, MSUA and MOSST (Robert Slater interview). The Ministry of State for Urban Affairs was short lived, lasting from 1971 until 1979. The provinces undercut it for jurisdictional reasons, and it was opposed by other government ministries who feared MSUA was encroaching on their policy areas (Spicer 2012).

In contrast, the Ministry of State for Science and Technology has endured from 1971 until the present, although its survival has meant the loss of its environmental orientation. The first minister for MOSST was Alastair Gillespie, who was involved in the early Club of Rome meetings, attended the Montebello meeting, and announced the renewable energy programs of 1978. However, MOOST's alignment with the environment has evolved dramatically. Historically, the Ministry of State for Science and Technology has been held by a minister of a department, and the department MOSST has been associated with indicates its orientation and

function. MOSST went from being aligned with DOE and Energy, Mines and Resources under Trudeau in the 1970s to Minister of Regional Industrial Expansion and Small Business and Tourism under Mulroney in the 1980s and 1990s. Then, it was held by the Minister of Industry under Chretien, Harper and Justin Trudeau in the 2000s and 2010s. This evolution indicates a shift in how MOSST was oriented, from managing the environmental impacts of resource use towards promoting industrial expansion and growth. Thus, the transformative structural changes envisioned for the DOE, MSUA, and MOSST were eroded, through systemic resistance and compromise of the DOE's mandate, jurisdictional resistance and expiry of MSUA, and the shift in orientation of MOSST.

Likewise, measuring and including the environment in the national accounts has proven difficult in practice. Throughout the 1970s, Statistics Canada encountered significant methodological challenges, including the pitfalls of quantifying the environmental impacts of human activities, comparing them and determining their value in relation to orthodox economic statistics. By the early 1980s attempts to deal with the complexity of the task led to measures that became increasingly esoteric, philosophical and irrelevant (McDowall 2008). Their efforts led eventually to the 1986 publication of the State of the Environment Report in Canada (McDowall 2008). Mulroney would include the development of environmental statistics in the 1990 Green Plan before it was cancelled. These measures have continued to be developed but have remained largely innocuous and impotent, dwarfed by efforts to develop growth-oriented GDP statistics.

In each of these examples, transformative environmental initiatives encountered the dominant system and were stymied or co-opted. They either failed to gain traction, to become institutionalized with the intended characteristics (i.e. less growth, impact, energy), or to persist.

Selection against, replacement of, and loss of carriers of transformative environmental ideas

While communication between Trudeau and his Liberal government with the Club of Rome continued at least until the late 1970s, short-term problems and election pressures of this unsettled time made it difficult for them to continue to make the environment a priority. Tellingly, in a letter from R.J. Whitehead to Aurelio Peccei on October 6, 1978, Whitehead describes the PCO and P.E. Trudeau's preoccupation with short-term economic issues and elections as the reason Peccei's invitations were not accepted: "The P.C.O. is even reluctant to approach the Prime Minister who is preoccupied with the economy and, particularly with his

political future. [...election concerns are] likely to intensify [the government's] pre-occupation with short-term issues. These are the realities" (Whitehead 1978, p1).

This process not only constrained the Liberals' options, but also selected against the Conservatives. The Conservatives did not explicitly decide that environmental ideas no longer held merit, either logically or ethically. Rather, these ideas were not retained, either because the people that carried them were replaced, or they were discarded after having been selected against during elections. Deeply critical environmental ideas emerged through the Stanfield-Symons policy process, but after the unsuccessful elections in 1968, 1972, and 1974, the Stanfield-Symons policy process ended when Robert Stanfield left politics. In their 1976 leadership convention the Conservatives replaced Robert Stanfield with Joe Clark such that both the individuals and their ideas were lost. The Conservatives stopped talking about economic growth and the environment after the 1976 leadership change. Instead, they articulated neoliberal ideas and policies that reflected the problems of the day, but without the deep-thinking extensive policy process of Stanfield and Symons. For instance, the Conservatives' 1977 Kingston Statement lays out a set of neoliberal policies and completely omits the environment. Thus, only with the replacement of the Conservative leader and end of the Stanfield-Symons policy process were these ideas discarded. By the early 1980s environmental ideas and the people that carried them had left politics.

These political frustrations were echoed by Peccei himself just before he died on March 14, 1984. From 1968 until 1984, the Club of Rome had encountered governance issues as a critical barrier, and before his death Peccei had been preparing a document entitled *Governability and the Capacity to Govern*. This document identified the main governance problems that the Club of Rome had encountered: the limits of sovereignty in the face of global problems; the inability of siloed institutions and structures of government to address interconnected problems; and the short-term focus of electoral cycles in the face of long-term problems (Peccei 1984).

Subject to these dynamics, both major parties discarded these ideas, not because they were illogical or morally unjustified, but for particular reasons that can be understood as the dominant system entering a coevolutionary selection point – an unsettled time. Either ideas were discarded as politically unviable because they could neither be publicly voiced nor acted upon or the individuals or groups that carried those ideas were themselves replaced through elections. Following the 1974 election, of the four major party leaders only Trudeau would continue into

the next election. Moreover, there was a lack of attention to succession in both the Liberal party and the Club of Rome (Churchill 2006). P.E. Trudeau did not place much importance on succession in the Liberal party, and was replaced with John Turner who was defeated in 1984. Before his defeat, John Turner purged many of the senior public servants that had helped P.E. Trudeau develop and carry environmental knowledge, often as members of the Club of Rome and its Canadian chapter (Churchill 2006). Similarly, Peccei's untimely death left a void of leadership in the Club of Rome. In these ways, deeply transformative environmental ideas did not succeed or survive the unsettled time from 1970-1982 in Canadian federal politics.

Discussion and conclusion

This chapter demonstrated how Canadian political parties in the 1970s held more deeply transformative ideas and ambitions than previously thought. Trudeau's Liberal government held and attempted to act on environmental ideas that deeply challenged the status quo throughout the 1970s. In the early 1970s influential members of the federal government including P.E. Trudeau met with members of the Club of Rome on several occasions. Trudeau and his government supported the Club of Rome's activities, funding its Montebello meeting, which contributed to the development of *Limits to Growth*. Trudeau and his administration attempted to implement a systems approach, publicly and repeatedly questioned economic growth on environmental grounds, and proposed net human benefit as an alternative.

These environmental aspirations continued despite energy and economic crises. Even in the wake of the 1973 OPEC oil crisis and minority government Trudeau attended the Club of Rome's Salzburg conference. Trudeau continued to advocate for net human benefit and the 1974 Turner budget called on Canadians to adopt a different societal vision and values that took into account the Earth's finite limits. Trudeau maintained contact with the Club of Rome at least until 1978 and the Liberal government's transformative way of thinking about the environment endured throughout the 1970s until the mid-1980s. As former Minister of the Environment John Roberts describes, "By the mid-1980s Environment Canada had recognized that effective environmental action must be rooted in a long-term approach, which meant husbanding our resources, managing them in a way that would sustain and renew them and guiding economic development within recognized ecological limits" (Roberts 1990, p174).

Thus, while Doern and Conway (1994) argue that P.E. Trudeau lost his initial enthusiasm for the environment by the mid-1970s, this chapter demonstrates that he and the Liberal government engaged with, supported, and attempted to act on transformative environmental ideas even after economic and oil crises of the mid-1970s. Moreover, while Doern, Auld and Stoney argue that the Trudeau government "did not systematically attend to environmental policy and governance" (2015, p57), this chapter demonstrated that a holistic systems approach was central to their attempts to govern environmental problems, explicit in their urban, science and technology, economic and energy policies.

While Doern, Auld and Stoney (2015) situate environmental governance in relation to and eclipsed by dominant issues of the day such as the economy, energy and national unity, they do not account for or attempt to explain how and why the context of the 1970s and these issues influenced the environmental outcome. In contrast, this chapter showed how this period can be understood as an unsettled time and the environmental outcomes can be explained within the context and thinking of the times. Accordingly, the period between 1970 and 1982 was an unsettled time characterized by persistent destabilizing forces, including stagflation, energy crises and national unity concerns. The dominant system, evolving throughout this unsettled time, acted as a selection environment to structurally constrain, deter and prevent limits and environmental critiques from gaining consensus or becoming prevalent. Within this context, policies and actions that did not promote growth were politically non-viable, whereas pro-growth policies were politically successful. Either ideas that challenged growth were seen as political suicide and discarded or politicians and parties that supported these ideas lost elections and were replaced. From 1968-1972, the Liberals encountered structural constraints and conventional wisdom that made policies that challenged growth politically risky. As Canada entered an unsettled time, Liberal ideas and policies that went against conventional wisdom encountered structural constraints and dynamics. From 1973 onwards, destabilizing forces favoured short-term focus on economic and energy priorities. Short-term crisis management created new problems that in turn demanded solutions. These dynamics selected for pursuit of economic growth and its further entrenchment rather than its rejection. Thus, in addition to scientific rationales this analysis emphasized the constraining influence of conventional wisdom, election prospects and political survival, and the public agenda and political priorities in the face of urgent crises.

This unsettled time opened up new opportunities to deeply question and challenge conventional wisdom, dominant practices and established ways of life, leading to promising ideas, policy proposals, visions and calls for new values. Ultimately, this can be understood as an escalating process by which previously legitimate assumptions, roles and relationships, and ways of life are questioned, challenged, and may be excavated in the search for solutions. These dynamics created openings to challenge assumptions such as economic growth and the work ethic, roles and relationships such as the relationship between the state and citizens, and ways of life such as consumerism.

At the same time, this chapter showed how unsettled times can exacerbate existing tensions and trade-offs, leaving less space to make decisions that might be difficult but desirable. In the Trudeau era legitimate political leadership and action became even more closely entwined with societal will and public support. Were the 1970s a missed opportunity that demanded stronger leadership and decisive action? Or were Canadians not yet ready for the changes proposed and called for by the Trudeau government?

An important lesson is that controlling the outcomes of unsettled times is severely limited because short-term interventions that mitigate destabilizing forces and address crises often have long-term systemic impacts that are difficult to anticipate and may have undesirable consequences. Indeed, the results of the 1970s were driven not only by the immediate problems, but also the evolving impacts and longer term reverberations of short-term solutions. This includes highly political unintended consequences such as Western alienation, the mobilization of the business lobby and the shift to monetarism and neoclassical economics. In broad perspective, the Trudeau era was a fumbling and largely failed attempt to renegotiate the relationship between government and society in the face of compounding pressures and overwhelming crises. The search for an ecologically benign economy-environment relationship was a casualty.

Chapter 8: Canadian environmental politics as progressive selection Evidence from elite interviews

Canadian environmental politics began in the 1970s as ambitious, radical and transformative, challenging status quo thinking and the dominant system. Canadian political leaders appear to have considered and engaged with deeply critical environmental ideas, embraced a systems perspective, and called for a new ethical vision that respected the environment. In the early 1970s Prime Minister P.E. Trudeau[8] and other leaders articulated deep environmental critiques of economic growth and the trajectory of Canadian economic life (Doern and Conway 1994). Trudeau openly criticized capitalism and emphasized the need to tame greed rather than be dominated by the market system (Churchill 2006), and his 1970 Throne Speech envisioned a Department of the Environment (DOE) with an elaborate role and mandate (Trudeau 1970). Moreover, both the Science Council of Canada's Conserver Society and Finance Minister John Turner's 1974 federal budget called for and articulated an ethical vision for Canadian society that embraced new values of conservation and respect for the environment (Trim 2015; Turner 1974).

Although these examples represent an ambitious vision deeply critical of the status quo, the history of Canadian environmental politics has been largely regressive when compared to the transformative ideas, ambition, and efforts put forth. In the 1980s and early 1990s, Canada played an active leadership role on the environment through international initiatives such as the 1987 Brundtland Commission and 1992 Rio Earth Summit, and nationally by setting up national and provincial round tables and developing the 1990 Green Plan. However, in 1992-3, Canada fell from international leader to laggard and inaction (Litfin 2000). Then, from 2008 onwards, the economy-environment relationship was increasingly polarized and carbon pricing became politicized, with the Conservative government rejecting it (Harrison 2012). Only recently has Canada returned to acting on climate change (MacNeil 2016), and deep tensions persist in terms of national unity and polarization between the economy and the environment.

One might argue that this decline can be attributed to the ebb and flow of political and public interest. Indeed, in Canada researchers have long observed that the environment

[8] Former Canadian Prime Minister Pierre Elliott Trudeau (1968-1984), not to be confused with Prime Minister Justin Trudeau (2015-). Trudeau will refer to P.E. Trudeau.

periodically rises and falls in terms of public profile, political interest, ambition and action (Doern and Conway 1994). For instance, Doern and Conway (1994) argue that from 1970-1975 the environment enjoyed initial enthusiasm. From 1976-1986 only small steps were made on the environment and implementation was lacking. From 1986 until the early 1990s, the environment rose again in profile, leadership and action. Then, from about 1993 until the election of Justin Trudeau in 2015 the environment was largely ignored, and has only recently been granted higher importance. Colloquially, this is often perceived in terms of the ebb and flow of public and political concern for the environment as those concerns are overtaken and displaced by economic priorities.

Rather than simply a benign and everyday process of drifting public interest, I argue that that beneath the noise of this ebb and flow, Canada's capacity to deal with environmental problems has been systematically eroded compared to what it might have been. Research into Canadian environmental politics and climate politics has proposed a number of explanations for why Canada has failed to deliver on its early and promising ideas and leadership, and instead continued backsliding. These factors are complex and interrelated, including shifting advocacy coalitions, national unity tensions, political leadership, and public opinion (Harrison 1996; Litfin 2000; Harrison 2012). For instance, strong resistance to major environmental changes has come from cabinet, bureaucrats, and others (Churchill 2006; Hoberg and Harrison 1994).

Few analyses, however, have explored the systematic structural constraints that limit progress on the environment. There are two structural dynamics that are specific to Canada: Canada's constitutional division of authority as a Federation, and its sensitivity to events in the United States (Litfin 2000). These structural factors distort the typical ebb and flow of public and political support, often exacerbating existing tensions. For instance, Harrison (1996) argues that the oscillating pattern of federal activism on environmental policy tends to follow public opinion, with the federal government claiming less jurisdictional authority when public support is low. When the environment is overtaken by economic crises, elections favour leaders considered best able to manage those economic issues (Harrison 2012). Complicating this picture, MacNeil (2016) shows how neoliberalism has undermined social support systems, leaving countries with liberal market economies vulnerable to anti-tax rhetoric. This has left Canadians vulnerable to global economic instabilities and susceptible to populist ideas that carbon pricing was anti-economic (MacNeil 2016).

Yet these explanations only tangentially address the structural or systemic forces involved. For instance, while MacNeil argues that neoliberal reforms increase the potential that a country will be hostile to carbon taxes that threaten livelihoods of workers, he simply recognizes that "prohibitive structural factors" also prevent environmental action (2016, p22). While these accounts explain how the typical ebb and flow is exacerbated and amplified, they do not account for the longer term erosion of ideas, capacities and ambition in Canadian environmental politics. Understanding this systemic erosion of environmental ideas, capacities and ambition is important because, even with strong leadership on the environment, it remains uncertain whether Canada will take sufficient action to meet its Paris Accord commitments to reduce greenhouse gas emissions. Researchers argue that meeting Canada's commitments to the Paris Agreement requires "fundamental changes" (Dalby 2019, p100), but there is no sign that such broad systemic thinking is present in the current administration (MacNeil and Paterson 2016).

This chapter develops and demonstrates a novel explanation for Canada's systematic failure to act on the environment, which I call progressive selection. Building on Steven Bernstein's (2001) socio-evolutionary explanation, I propose that Canada's regression on the environment has not primarily been planned and intentional, but results from the progressive selection of Canadian environmental policy in relation to the dominant system and its dynamics at key moments. This research explored elites' perspectives of the dominant system and its dynamics at key selection moments in Canadian politics. Elite decision-makers have privileged access to information, events, and decisions that provide insights into the complexities of key political moments. Drawing on elite interviews in Canadian environmental politics and an articulation of the dominant system, this research shows how Canadian environmental and climate policy has emerged and evolved within this system so that policies were selected to fit with its dominant features. As such, it is precisely at those moments when the environment is least prioritized and the economy is most urgently in need of attention that the environment suffers the most. This national example demonstrates the systematic and progressive nature of this selection process and its far-reaching implications. Counteracting this process will involve challenging conventional wisdom and established common sense, not only of neoliberal globalization, but also deeply entrenched assumptions about economic growth, the nature of work, consumerist lifestyles, and our dependence on extractivist, fossil fuel-based, energy-intensive economies.

Progressive selection, the dominant system, and elite perspectives

Understanding environmental policy in relation to the dominant political-economic system can help us understand Canada's troubling environmental backslide and inability to affect the transition to a sustainable low-carbon economy. As with any organization or culture with a history, new elements or approaches to environmental policy are not established in isolation, but encounter and may be integrated into the existing political-economic system. However, not all elements are adopted and established. Rather, some elements are selected for, while others are rejected. This suggests a process of selection in relation to the dominant system and its dynamics.

Steven Bernstein (2001) has described this process as socio-evolutionary selection, whereby new environmental ideas are adopted or fail to persist, depending on how they fit and interact with the established structures or layers they attempt to modify. As new elements are introduced, established layers constrain the entry of new elements, acting as a selection mechanism, while new layers are laid down upon and presuppose established ones. In this way, existing social structure "constrains and enables entrance of new ideas" (Bernstein 2001, p185) because new ideas need to find fitness with existing layers. For Bernstein, legitimacy is central to fitness in this selection process. Three factors determine whether new elements to succeed: the perceived legitimacy of the source of the ideas (i.e. their credibility), their fit with already established social structure, and their fit with key actors' identities (Bernstein 2001).

While socio-evolution provides a promising way to explain how new ideas are selected in relation to the dominant system, it foregrounds legitimation as a conscious and purposeful human activity at the expense of a more holistic explanation. Indeed, Bernstein focuses on norms, and assumes their evolution "exists in the minds of actors" who "engage in purposeful action and self-reflexive thought" (2001, p184). However, the emergent coevolutionary view I developed in Chapter 5, selection is not merely a human social process of ideas and legitimation in relation to social structures, but a multi-dimensional process with a material dimension. Although the material (economic, ecological, energetic) dimension is often taken for granted, it exhibits a coercive constraining or destabilizing force. Thus, while for Bernstein, the interaction between purposeful action and social structure is what requires mapping, an emergent coevolutionary

view suggests that larger material-economic (and even ecological) constraining and destabilizing forces also need to be accounted for.

From an emergent coevolutionary perspective, the relationship between new environmental ideas and the dominant system can be understood by looking at key moments during which the causal influence of tensions and trade-offs in the dominant system become apparent. Selection occurs unevenly. Systemic tensions, trade-offs and incompatibilities may exist for long periods, and only become apparent or problematic in times of stress. At such moments, existing tensions, trade-offs, and fundamental incompatibilities are more likely to surface and to be difficult to resolve. Thus, key selection moments are most likely to occur when the dominant system is unstable or under threat.

The dominant system in Canadian politics

In Canada, neoliberal globalization brought the establishment and entrenchment of a new layer of the dominant system (Figure 8.1). The McDonald Commission, initiated in 1982 to address Canada's economic problems of the previous decade, resulted in the entrenchment of free trade (Inwood 2005). The MacDonald Commission legitimated free trade and open financial markets, which were contested in the late 1980s and implemented in the early 1990s. The imperative for balanced budgets and deficit reduction also gained political support in the early 1990s and was implemented by Chretien's 1993 Liberal government. These changes coincided with the roll-back of the state, from the more interventionist welfare state of the post-WWII period towards minimal regulation, a smaller public service, and reduced taxes.

Neoliberal globalization is only the most recent and superficial layer of the dominant system. In Canada, neoliberal globalization presupposes a foundation of economic growth balanced with state support of jobs and managed inflation, welfare state programs, national unity tensions, consumerism, industrialization, the ideal of prosperity as material progress, and an economy based on the development and export of natural resources. These elements in turn presuppose even deeper layers such as the domination of nature and colonization of First Nations' through entrenched elements such as settlement, immigration, private property and sovereignty.

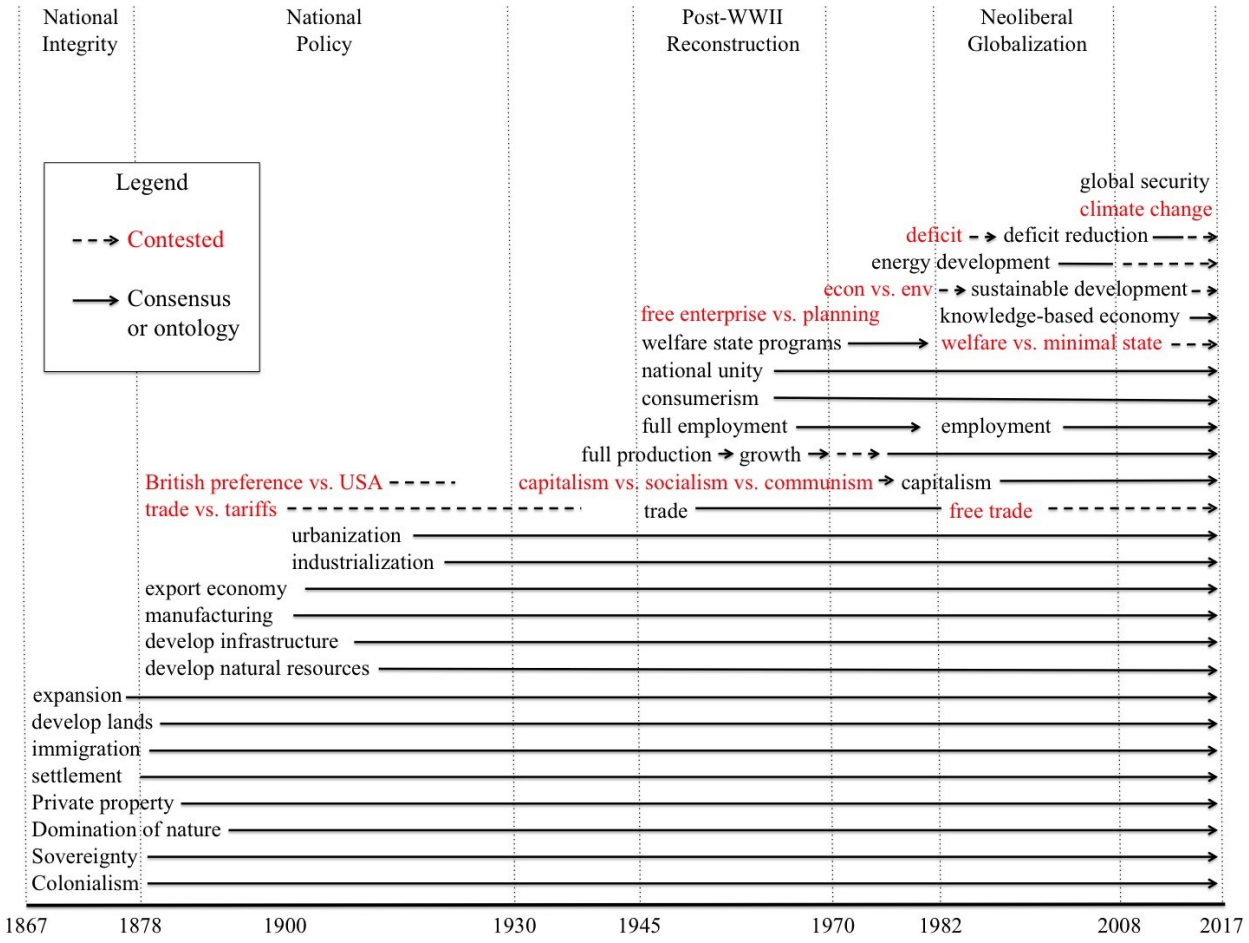

Figure 8.1. The dominant belief system in Canadian federal politics 1867-2017
Solid black arrows indicate consensus or presupposed ontology, whereas dashed lines indicate continued contestation. Ideological debates are red.

This emergent coevolutionary perspective and understanding of the dominant system in Canadian federal politics provides a framework to understand the relationship between new environmental ideas and the dominant system at key selection moments.

Elite interviews and historical perspectives

This conceptual framework was used to guide data collection and provide themes for analysis of both semi-structured interviews and document review. Semi-structured interviews were conducted from September 2018 until April 2019 with 22 elite participants involved in Canadian federal economic and the environmental policy, with particular attention to climate change. Elite decision-makers have privileged access that allows them to observe and understand

the complexities of key selection moments. Research participants were recruited based on their current or past participation in Canadian federal policy-making related to the economy and the environment with particular focus on climate change policy. Participants included politicians, senior public servants, business and labour leaders, NGO representatives, and academics (Table 8.1). Within the Federal government, participants included party leaders, cabinet ministers, members of parliament on portfolios related to economic and environmental policy, and opposition party representatives. Within the Canadian federal public service, participants included deputy ministers and senior policy advisors in departments such as the Privy Council Office (PCO), the Ministry of Finance, Statistics Canada, and Environment and Climate Change Canada (ECCC). Major non-state actors were also recruited, including CEOs, union leaders, representatives from environmental groups, and academics. Given the historical focus of this study, and recognizing the challenges of gaining access to senior members of the public service and elected officials, participants included past as well as present political and economic elite decision-makers at the Canadian national level (Harvey 2011). The relevant experience of participants ranged from 1968-present, spanning a few years to five decades.

Table 8.1. Interview participants' years of relevant experience, role and perspective

#	Years	Role	Perspective
1	1968-2006	Party leader, caucus chair, MP	New Democratic Party
2	1969-1993	Minister of Environment, MP	Conservative party
3	1968-present	Former president and CEO, IISD	ENGO
4	1971-2003	Senior public servant	Environment Canada
5	1975-2002	Senior public servant	Environment Canada, PCO
6	1970s-present	Professor, senior public servant	Academic, ENGO, ECCC
7	1984-2012	Minister of Environment, QC Premier	Conservative party
8	1986-present	Party leader, MP	Green party
9	1987-present	Party leader, MP	Reform Party of Canada
10	1980s-present*	Senior public servant	Macroeconomic, financial
11	1980s-present*	Senior public servant	Environment Canada
12	1994-2018	Party leader, QC Environment Minister	New Democratic Party
13	1995-present	Executive Director, CCLS	NGO
14	1997-present	Staff; Executive Director, Smart Prosperity	Environment Canada, ENGO
15	2000s-present*	Senior public servant	Environment Canada
16	2000s-2010s*	Senior public servant	Environment Canada, industry
17	2004-2017	Political staff	Environment Canada
18	2004-present	Professor; Chair, Ecofiscal Commission	Academic, ENGO
19	2006-2013	Senior public servant	Statistics Canada
20	2007-2017	Former CEO of DSF, Ecofiscal Commission	Business, ENGO
21	2008-present	President, BGC; senior staff, USW	Labour
22	2015-present	Senior staff, policy institute	Business, NGO

* Some interviewees have elected to remain anonymous, in which case dates are given as decade ranges to maintain confidentiality. MP: member of parliament; PCO: Privy Council Office; ECCC: Environment and Climate Change Canada; QC: Province of Quebec, Canada; CCLS: Canadian Centre for Living Standards; IISD: International Institute of Sustainable Development; DSF: David Suzuki Foundation; BGC: Blue-Green Canada; USW: United Steel Workers

Research participants were recruited by email and phone using publicly available contact information and invited to participate in the study. Snowball sampling methods were used to identify additional participants with relevant perspectives (Small 2009). Snowball sampling involves identifying subsequent individuals from previous interviews, beginning by identifying initial interviewees using selection criteria such as experience at the time and in the subject of interest (Reed et al. 2009). Interviews were continued until the data became saturated, meaning that no new information was revealed from subsequent interviews or no new interviewees were identified, and until practical constraints of time or resources were reached (Small 2009). Rather than attempt to interview all stakeholders, this research aimed to identify and interview key informants able to provide critical, reflective, and historical perspectives that captured a range of perspectives. Thus, sampling was not representative, but directed and exploratory.

Interviews explored interviewee perspectives and experiences related to the historical evolution and present federal government approach to economic and environmental policy. Attention was paid to key selection moments, events, and policies in Canada, including the limits to growth debate (1970s), the transition to neoliberalism (early 1980s), the Green Plan and national unity crisis (early 1990s), the global financial crisis (2008-2009), the Paris Agreement (2015) and the development of the Pan-Canadian Framework (2015-2017).

Interviews were conducted in-person or by phone and lasted 1-2 hours. Interviews were recorded with interviewees' consent. Interviews were transcribed verbatim and verified to address any ambiguities or questions. Follow-up interviews were conducted as needed.

Document review provided a second data source. Key documents included Budget Speeches, Throne Speeches, party election platforms, reports from the Government of Canada, specific ministries, NGOs, political parties, environmental groups, businesses and labour groups, and news articles.

Interview transcripts and documents were coded for themes and analyzed using QSR NVivo12. Analysis involved the integration and evaluation of data at key selection moments in relation to elements of the dominant system. Key selection moments were identified through an iterative process informed by the literature, interviews, and document review. These key moments are 1982-1983, 1992-1993 and 2008-2009. Economic crises, deficit reduction programs, federal elections and national unity tensions were influential at these different moments in different ways. Results are organized according to these key selection moments.

Progressive selection at key moments in the settled time of neoliberal globalization

A new era of neoliberal globalization: the 1982-1983 recession and change in leadership

The 1982-1983 recession and change in leadership is the first selection moment in this process. With the recession, the deeply critical environmental proposals of politicians in the 1970s were largely overshadowed by economic concerns, energy crises, and national unity concerns. The 1982-1983 recession resulted in budget cuts and the cancellation of the renewable energy programs that were a direct result of the Conserver Society initiatives of the 1970s (Trim 2015), while the National Energy Program (1980-1985) meant that fossil fuels in Western Canada continued to be developed. In 1983, increasing inflation and decreasing oil prices

resulted in the cancellation of solar energy development funding (Trim 2015). As a result, as the Conserver Society renewable energy programs were discarded.

Shortly thereafter, a Liberal leadership transition from P.E. Trudeau to John Turner, and the subsequent 1984 election of Brian Mulroney resulted in a purging of many politicians and senior public servants who were most involved in environmental discussions critiquing economic growth and advocating for a systems approach (Churchill 2006). With the 1983 Liberal change in leadership, the dominant thinking and approach to policy-making shifted from an integrative, systemic planning approach to a more streamlined, efficient approach (Churchill 2006). As a result, the most ambitious, radical environmental proposals such critiques of capitalism and private profit, de-industrialization, consumerist lifestyles, and limits to growth were discarded.

However, some important and ambitious elements of environmental thinking were retained, including (1) the need to change the nature of growth and the economy-environment relationship; (2) an integrative systems approach; and (3) the imperative to reconsider human visions of prosperity, lifestyles, and relationship with the earth.

While the idea that economic growth could be pursued remained entrenched, it was apparent that the nature of growth would need to be changed to protect the environment. Globally, the Brundtland Commission's concept of sustainable development rejected absolute limits: "The concept of sustainable development does imply limits - not absolute limits but limitations imposed by the present state of technology and social organization on environmental resources and by the ability of the biosphere to absorb the effects of human activities. But technology and social organization can be both managed and improved to make way for a new era of economic growth" (Brundtland 1987, p16). Economic growth was not rejected, but endorsed as essential for global solutions. However, in Canada the Conservative leadership recognized the need to shift or redefine what growth meant. In 1984, Prime Minister Brian Mulroney emphasized the importance of changing the nature of growth: "And perhaps most importantly, managing change means changing our attitude towards growth. It means ending our complacent reliance on natural resources, and shifting our efforts to human resources" (Con 1984, p6).

The idea that society needed to work through and improve the economy-environment relationship was also retained, institutionalized in the form of national and provincial round tables. The Brundtland Commission held four hearings in Canada, stimulating both collaborative

thinking on the economy-environment relationship and a multi-stakeholder decision-making process to work through this issue. In October 1986, the National Task Force on the Environment and Economy was created as a "direct follow-up" to World Commission on Environment and Development hearings held in Canada earlier that year (NTFEE 1987, p1). The task force was mandated to "foster and promote environmentally sound economic development" and explicitly quoted the Brundtland Report's emphasis that this could be done "in a new era of economic growth" (NTFEE 1987, p1). Its main objective was "to promote environmentally sound economic growth and development, not to promote economic growth or environmental protection in isolation" (NTFEE 1987, p2). The task force called for the creation of both provincial and national round tables to provide senior decision makers a forum to work towards consensus on integrating economic and environmental planning (NTFEE 1987). These provincial and national round tables created a space for multi-stakeholder discussions among CEOs, the government, and environmental groups. In some instances, a Sustainable Development Strategy, Act or other policy was produced for the province (David Runnalls interview).

Both integrative systems approach and the imperative to reconsider human visions of prosperity, Canadian consumerist lifestyles, and relationship with the earth persisted in the Green Plan, in other initiatives, and in Prime Minister Brian Mulroney's leadership. An integrative systems approach survived as an important part of the 1990 Green Plan, which was developed in the 1980s and delivered in the early 1990s. The ethical core was retained through the Brundtland Commission and the Green Plan, but also through Canadian leadership. And the need to change lifestyles was carried over from 1970s Conserver Society and Turner budget. For instance, in the late 1980s "Environment Minister, Lucien Bouchard, declared publicly that Canadians should be prepared to change their lifestyles radically to combat global warming" (Litfin 2000, p243).

Thus, although the most radical environmental proposals from the 1970s had expired, many deeply critical ideas were retained and allowed Canada to play a leading role on the environment throughout the 1980s and early 1990s, both domestically and globally. Canada played leading roles in the 1987 Brundtland Commission, the 1988 Toronto Climate Conference, and the 1992 Rio Earth Summit. Canada signed an acid rain agreement with the United States despite resistance and managed to virtually eliminate its domestic sulfur pollution. Finally, Canada developed, passed, and began to implement the ambitious 1990 Green Plan.

In sum, the 1982-1983 recession meant that features of the dominant system – economic growth and fossil fuel energy development – were selected for at the expense of Canada's most ambitious environmental energy initiatives and its most transformative thinking on the economy and the environment. Energy conservation and the renewable energy programs of the Conserver Society were defunded while fossil fuel development continued as part of the National Energy Program. Meanwhile, the deep critiques and discussions of the 1970s that had challenged economic growth gave way to the idea that growth could persist, although the nature of growth needed to change. In this way, some of Canada's most transformative environmental thinking and ambitious environmental policies were lost.

From leader to laggard: the 1992-1993 recession, election and national unity crisis

A number of events came together in the early 1990s that selected for the economy and against the environment, resulting in the shift from Canada being a world leader to a laggard on the environment. The 1992-1993 global recession hit Canada especially hard, just as deficit reduction rapidly gained prominence and urgency. The Government of Canada's credit rating was in jeopardy of being downgraded and this was seen as a serious threat. In this context, the 1993 election resulted in a new government that prioritized eliminating the deficit. This urgent situation, focused on the finances of the country, was compounded by a looming national unity crisis.

Within this context, a number of significant changes came together to select for Canadian environmental policy that fit with the dominant system and negatively impacted Canada's ability to tackle environmental problems. The election meant a change in leadership and agenda that shifted priorities from environmental action to deficit reduction. The impact of this change in leadership and shift in priorities is well illustrated by the Green Plan, a systematic and ambitious federal environmental plan launched in 1990 by Brian Mulroney's government. Before the 1993 election, the Green Plan had faced resistance from federal departments demanding their fair share of money in the face of the recession (Jean Charest interview). Yet, with leadership and backing from the Prime Minister and three successive ministers of the Environment, it was created, funded, and was being implemented. However, with the change in government, the Green Plan and related environmental programs were not renewed, were defunded or were otherwise given lower priority. A senior public servant in Environment Canada emphasized the

importance of this shift in leadership and the environment as an agenda priority: "Mulroney, it was his agenda item. And if you're on the PM's agenda things happen. And if you're not on the PM's agenda you're suckin' air" (Robert Slater interview).

Partisan political ownership also played a role in this shift because the Green Plan was seen as the previous government's plan and was phased out. Mel Cappe, the Deputy Minister of the Environment at the time, emphasizes "the Liberal government hadn't done the Green Plan and hadn't gone to Rio so there was a "the other guys' program" element to this." He explains the political rationale: "You couldn't crap on it because it was the other guy's because it was good, but neither could you embrace it because it was the other guy's" (Mel Cappe interview). Likewise, senior public servant, Robert Slater, emphasized the impact of this partisan political branding: "It was the antichrist. They just said we're not doing it. We'll just finish it off. It was a funding program. It started as a five year program, ended up being 7, being stretched out. Once they'd finished it, that's it" (Slater interview). The change in leadership, priorities, and the fact that the Green Plan was seen as a partisan plan meant that it was phased out. Ambitions to develop subsequent versions were never realized.

At the same time, the Liberal government's deficit reduction plan took over the agenda. The Liberal party's view of this situation illustrates how, in this key moment, the real material-economic forces influenced their priorities:

> Our economy is in disarray. We are now entering our third year of double-digit unemployment, and it is expected to remain above 10 percent until 1995. Over a million Canadian children live in poverty. Many of our national institutions have been shaken. Our cultural and social fabric has been weakened. For an overwhelming number of Canadians, hope for tomorrow has turned to fear of the future (Lib 1993, p9).

As a senior public servant in Environment Canada describes, the impact of this government-wide deficit reduction plan was to overwhelm even his goals: "There was no bandwidth to be able to do other things. This took 100% of my time. I had 20% to do other things. I was working 120%. It was totally dominant because this is existential. It's whether the department will survive and in what form and what will it look like" (Cappe interview).

If there was little priority placed on environmental protection in Environment Canada, the environment was crowded out even more on the national agenda with the national unity crisis. The Meech Lake accord was a constitutional nightmare, and the subsequent 1992 Charlottetown

accord was defeated, ultimately failing to quell rising national unity tensions. This, one ENGO representative noted, overwhelmed the national agenda: "It was thought to be a complete threat to national unity. So it was a constitutional nightmare. And then the recession came. And Canada got hit almost harder than anybody else. This was in 1992-1993. And then in 1993 there was the election (...) and Jean Chretien came to power" (Runnalls interview). The 1993 federal election resulted in the pro-separatist Bloc Quebecois becoming the official opposition, and positioned national unity as a central issue in Canadian politics. These tensions escalated until the 1995 Quebec referendum. Former Minister of Environment and Conservative party leader Jean Charest remarks, "After that, [...] the agenda changed in the country and we were all just sucked up in the referendum story. And that consumed the public agenda." (Charest interview). He elaborates,

> ...then everything is just referendum. Period. All the oxygen is just sucked up. Everything is just referendum. Period. And then there's the crash of the referendum because it's a crash. The outcome is favourable to the federalist side, but only by a whisker. And we're going to spend the next few years picking up the pieces and trying to find our bearings as a country to get things moving again (Charest interview).

Together, the election, deficit reduction, and national unity crisis, not only shifted the environment off the agenda, but also resulted in a significant loss of capacities and functions both in Environment Canada and nationally. One result of the deficit reduction program was a reduction in capacities and restructuring of Environment Canada. The Liberals' 1994 program review deficit reduction plan meant budget reductions of 33% and cut Environment Canada's staff by 35%. These cuts did not entail merely incremental reductions, but required a rethink of the department and the essential functions it was able to perform. These impacts are captured by a senior public servant involved in these cuts:

> the budget for the DOE goes down, 33% actually, and we went down in staff by 35%. And that is not a marginal change. That's a substantive change. And therefore, it required a rethink. The 1, 2, 5% you can do marginally, but this required a rethink of the department. That's what I led, which was a rethink of what lines of business should we close out? What lines of business should we be in? (Cappe interview)

While retaining its core scientific functions, this restructuring of Environment Canada eliminated public services such as State of the Environment Reporting, education, and public outreach.

Rather than limited to the Green Plan and Environment Canada, the impacts of this selection moment were widespread. Budget cuts and other changes brought a cultural shift in government and Environment Canada in which a systems perspective and need for a shift in cultural values were largely lost in favour of managerial thinking. And as a result of deficit reductions, the provincial round tables were defunded. Canada lost significant capacities, ideas and momentum that had been developed since the 1970s. The result was a systematic and radical shift from environmental leader to laggard and inaction of important issues such as climate change. Subsequent Liberal governments would develop a series of climate proposals, but each was discarded, the last when Harper was elected in 2006 (Harrison 2010; 2012).

The 1993 election had another important consequence: the collapse of the Conservative party meant its radical transformation. The traditional political base of the Conservative party had been rural agricultural and resource communities. With post-WWII development followed by neoliberal globalization, Canadian life had shifted dramatically, eroding the Conservative political base. During the 1993 election the Bloc Quebecois and Reform Party of Canada gained significant ground, leaving the pro-environment Conservatives with only two members of parliament and costing them official party status. What ensued was a struggle for political survival. In 2003, the Conservative party merged with the Canadian Alliance, the successor to the Reform party. The result was a radical transformation in the identity and political base of the Conservative Party of Canada from once the most environmental party to one no longer aligned with and in some instances fundamentally opposed to the environment (McMillan 2016), and anchored by support from fossil fuel dependent Western provinces.

In sum, the 1992-3 recession, national unity crisis, and federal election resulted in the loss of transformative environmental ideas and capacities in Canada. The imperatives to eliminate the deficit and address national unity were pursued as the expense of environmental ideas, policies, and capacities. However, human social processes of legitimation about the source of ideas and their fit with social structures and identities do not adequately explain these outcomes. These outcomes were also driven by practical, economic, and contextual factors that had systemic and material dimensions that can only be indirectly linked to legitimacy.

The 2008-2009 financial crisis: agenda priorities and capacities in the face of deficit reduction

The 2008-2009 period was the third key selection moment in this process of progressive selection, which resulted in further selection for Canadian environmental policy that aligned with the dominant system. A number of factors came together in 2008-2009 that resulted in the selection for dominant economic features and against carbon pricing. The financial crisis presented a situation outside of normal experience that overtook the agenda. This provided an opportunity for the politicization of the economy-environment relationship and polarization of carbon pricing against the neoliberal imperative of reducing taxes. Once polarized and politicized, carbon pricing was selected against and rejected. This selection occurred in relation to the dominant system, including economic growth, the need to follow USA as a result of free trade and economic integration, entrenched elements such as deficit reduction and reducing taxes, as well as deeper elements such as economic growth, national unity tensions, and consumerist lifestyles.

A crisis agenda

The 2008-2009 financial crisis was outside of normal experience for the federal government and became an emergency of utmost priority. As a senior public servant in Environment Canada observed, "the financial crisis was, probably not unprecedented in history, by any means, but certainly outside of the normal experience of anyone who was in government, either as a public servant or as a politician. So that was unsettling, right? People didn't know what all this meant. We hadn't seen it before, or for a number of generations" (Anonymous interview E1). Another macroeconomic expert describes the situation as an overwhelming crisis: "The financial crisis had its darkest days in the fall of 2008. By the time I show up it's not over by any means, but they are out of the deepest, darkest part of the woods. Financial markets, by that time, are no longer melting down. At that point they no longer believe it's going to be a systemic collapse. Whereas, in October, they were thinking that the financial system was likely – possible – to collapse" (Chris Ragan interview).

This crisis dominated the agenda, taking precedence over all other considerations. By 2009, the priority was macroeconomic policy to deal with the crisis: "It was crisis mode a couple of months later. The crisis, I would say, is over. But you still haven't seen.... And monetary policy has been absolutely pedal to the metal at this point. Fiscal policy hasn't quite kicked in"

(Ragan interview). Simply put, the financial crisis was the immediate and most important priority: "This is the fire and the fire trucks have arrived and the hoses are out. And you are absolutely fighting the fire with a fiscal stimulus and a monetary stimulus. So that was the dominant narrative of the day. Everything else, frankly, everything else, it might've been long run really important. But it wasn't today's urgent situation" (Ragan interview).

Polarizing the economy-environment relationship and politicizing carbon pricing

The 2008 election provided an opportunity for the Conservative party to polarize the economy-environment relationship by politicizing carbon pricing and pitting it against tax reduction and citizens' economic situation. The idea of carbon pricing had been around since at least the early 1990s and gained international momentum between the Rio Earth Summit and the Kyoto Protocol. In Canada, carbon pricing held initial consensus, with support from Canadian political parties and business. However, Canada was largely inactive on climate change and the environment from 1993 until the early 2000s, when Canada hosted the 2005 United Nations Climate conference (COP) in Montreal. Liberal environment minister Stéphane Dion organized the COP.

Carbon pricing continued to hold political consensus. Winning the 2006 election, Stephen Harper's Conservatives rejected international emissions trading and the Kyoto Protocol in favour of a "made in Canada" approach. However, in April 2007, the Harper government released Turning the Corner: An Action Plan to Reduce Greenhouse Gases and Air Pollution. This plan set intensity-based rather than absolute targets and would allow total emissions to rise with increasing energy output even if the amount of greenhouse gases produced per unit economic output decreased (Simpson, Jaccard and Rivers 2007). The Conservatives' plan gave the appearance of action on climate change while allowing for continued economic growth and increase in absolute emissions. Even still, with Turning the Corner the Conservatives were the first party in Canada to propose a carbon pricing system. Carbon pricing and the economy-environment relationship had not yet been politicized.

Then, during the 2008 federal election and in the context of increasing economic concerns, Stephen Harper's Conservatives politicized carbon pricing and polarized the economy-environment relationship. Liberal leader Stéphane Dion released the Green Shift plan in June 2008, making the environment the central focus of his platform. Core to this plan was a revenue-

neutral carbon levy or carbon tax (MacNeil 2016). This was the first time a major national party leader had run on a platform that had ambitious environmental action at its core, and Stephen Harper's Conservatives took advantage of this. The Conservatives claimed that the Liberal carbon tax "would plunge Canada into a deep and long recession, in which middle class jobs would vanish by the hundreds of thousands" (MacNeil 2016, p28). They labelled Dion's plan a "Job-killing carbon tax" that would hurt the economy. Harper pitted carbon pricing against the need to reduce taxes and protect the economy by framing the Green Shift as a risky "tax on everything" in the face of "global economic uncertainty" (Coyne 2008, p22). He argued that Dion's Green Shift threatened the wellbeing of the economy, emphasizing that the carbon tax would be an "economic catastrophe" for Canada, plunging the country into a "big recession" (Canadian Press, 2008). The Conservatives claimed the Green Shift would not only cause recession, but also threatened national unity. Harper argued, "By undermining the economy and by re-centralizing money and power in Ottawa, it can only undermine the progress we have been making on national unity" (Canadian Press, 2008). Harper claimed that the purpose of the carbon tax was to "get more money and power in Ottawa," which, he said, would increase political resentment is some regions, and stoke nationalist sentiment in Quebec" (Canadian Press, 2008). Thus, the polarization of the economy-environment relationship and politicization of carbon pricing pitted environmental action against elements of the established system, namely a carbon price against the neoliberal anti-tax position, and the supposed threat of a recession against the need for jobs and growth. Deeper still, the Liberal environmental plan was opposed based on structurally embedded national unity tensions and consumerist lifestyles. In these ways, environmental proposals were opposed and politicized in relation to features of the dominant system.

The 2008 election was the first time the leader of a major party had run on an environmental platform, and Dion's defeat was a learning moment for both sides. Before the 2019 election, former federal NDP leader Thomas Mulcair emphasized, "It's certainly the last time anyone's tried to run a campaign on an environmental platform" (Thomas Mulcair interview). Since Dion got burned on his environmental platform, it was avoided "like the plague," he explained, "Because people associate Dion's defeat with that" (Mulcair interview). Indeed, since then politicians and commentators alike have called a carbon tax "political suicide" and the "third rail of Canadian politics: Touch it and die" (Harrison 2012, p398).

Selection and rejection: the economy versus the environment

This polarization set up an explicit selection moment in which entrenched economic elements of the dominant system were selected for, while environmental objectives were rejected. First, free trade and the resultant economic integration with the United States was an important factor for whether carbon pricing was adopted. The Conservatives had been exploring options that would fit with the Waxman-Markey Bill, an American carbon emissions trading scheme that was approved in the US House in June 2009. However, when the Waxman-Markey Bill died in the US Senate, Harper's Conservatives dropped the idea of developing a compatible emissions trading system. Free trade and economic integration drove the choice, rather than environmental considerations.

Second, once the economy-environment relationship had been polarized, the Conservative government selected for economic growth and rejected carbon pricing. Macroeconomist Chris Ragan's experience inside the Department of Finance illustrates the explicit rejection of carbon pricing on economic grounds. In August of 2009, Chris Ragan was Clifford Clark Visiting Economist in the Department of Finance. He was asked to brief Minister of Environment Jim Flagherty on carbon pricing in advance of the Copenhagen climate meetings, which were December that year. He describes, "We put together a briefing note. And it was absolutely the intersection of economic growth and climate change policy because at one point he damn near fell off his chair when I showed him the modelling results from finance about what the impact on economic growth would be of different options" (Ragan interview). Ragan explains that he compared different carbon pricing policies by showing how each policy affected economic growth measured in GDP differently. "That's how it's done," he says.

Ragan intended to highlight how some climate pricing policies would cost more while others were better because they would cost less. However, when presented with this trade-off between economic growth and climate change policies, the Conservative government rejected having to make any trade-off by rejecting carbon pricing completely: "It was given to him by me intentionally that way. I wanted him to see that this was where we didn't want to be in this diagram. Where we wanted to be was here [Ragan points to the least expensive policy]. What he ended up doing was fighting a fight to make sure that we weren't even in this diagram" (Ragan interview). Ragan describes how the events that followed led to complete rejection of carbon

pricing: “So we had that briefing with Jim Flagherty. A few weeks later there was a cabinet meeting where Jim Flagherty and others were present. And that policy got discussed in a very heated way and it basically was rejected” (Ragan interview). When the existing carbon pricing policy was rejected, the result appeared illogical: “What ended up happening was that some time went by and then the government introduced, I thought, in my view, an even worse approach. And higher cost approach. That was the sector-by-sector regulatory approach” (Ragan interview).

Indeed, the Conservatives had publicly presented the economy and the environment as a zero sum game and elected to pursue economic priorities. While superficially, this had been presented as the choice between carbon pricing and the neoliberal imperative to reduce taxes, this decision was rooted in deeply entrenched features such as economic growth and consumer lifestyles. In November 2009, Harper “hewed to the view that most emissions targets would entail unacceptably adverse economic and lifestyle changes” (Everett, 2009, p44). In December 2009, Jim Prentice announced that Canada would not be using intensity based targets, and would instead use absolute targets of the sector-by-sector regulatory approach. In sum, when faced with the trade-off between implementing carbon pricing and economic growth, the Conservative chose economic growth.

Another illustration of this selection and rejection was the casualty of the National Round Table on the Economy and the Environment (NRTEE). The Conservative government asked the NRTEE to provide advice on carbon pricing policies so as to follow the leadership of United States President Obama. When the US failed to proceed with similar policies, Harper was unhappy with NRTEE’s Climate Prosperity reports: “Our work on this began with a reference from the Minister seeking to consider policies similar to Obama’s such as cap and trade. When Congress failed to pass the legislation, Prime Minister Harper backed away and attacked the Liberals for their carbon tax proposals. Our carbon pricing recommendations suffered from guilt by association. By 2011 and 2012, the PMO was unhappy with the NRTEE Climate Prosperity reports, having forgotten that it had originally requested this work” (NRTEE 2013, p9). In a minority parliament, NRTEE was given the role of parliamentary watchdog on Kyoto, which became a political minefield for the government (NRTEE 2013, p10). Ultimately, NRTEE was defunded for its role in carbon pricing to meet Kyoto targets. On May 5, 2014, John Baird declared in the House of Commons that “[NRTEE] has tabled more than 10 reports encouraging

a carbon tax. Now we know why the Liberal Party holds that organization so dear: because the Liberals truly want to bring in a carbon tax on every family in this country. Well, those of us on this side of the House will not let them do it." (Baird 2012). He continued that NRTEE should be defunded because it supported a carbon tax that would hurt the economy: "Why should taxpayers have to pay for more than 10 reports promoting a carbon tax, something that the people of Canada have repeatedly rejected? [...] It should agree with Canadians. It should agree with the government to no discussion of a carbon tax that would kill and hurt Canadian families" (Baird, 2012). Thus, in multiple instances, the Conservative party explicitly rejected carbon pricing on the basis that it did not fit with key elements of the dominant system.

Third, and less directly, this selection manifested itself through the entrenched imperative for deficit reduction, which pushed the environment off the agenda and resulted in relative inaction on environmental goals. Similar to 1992-1993, deficit reduction again preoccupied the government, taking over the agenda. As one senior public servant observed,

> the environment was not the top of the government's agenda. Priorities. That's always the case with governments. They have a small number of priorities. And if you're one of those priorities your files move, get resolved. If you're working on something that isn't near the top of their list, then your files don't move (Anonymous interview E1).

Instead, economic concerns, and especially deficit reduction remained a top priority of government. Indeed, one of the top three priorities of Environment Canada was the 2010-2011 Deficit Reduction Action Plan, which required a significant reduction in both budget and staff for Environment Canada (Anonymous interview E1).

The result was inaction on the environment, even within Environment Canada. While the deficit reduction plan did reduce environmental personnel and capacities, this inaction was not primarily because the plan explicitly attempted to reduce environmental capacities. Rather, the deficit took up time and attention that neutralized environmental action. As one senior official in the Department of the Environment describes,

> On the one hand, I would say that it had an important effect because it preoccupied the attention of the senior officials of the department as well as the minister. But I can't say to you that, because of the economic or fiscal situation, we decided not to do something on climate policy or species at risk or any of the other things that were our priorities because the financial situation was not appropriate. So it was an important issue in that it

took up a bunch of important time. And governments are like any other organization. They can only attend to a small number of things at once. If you have 20 priorities, you have no priorities. So the thing is, it took up a lot of time (Anonymous interview E1).

Another senior public servant in the Department of the Environment observes:

> Well, it certainly had a big impact on Environment Canada. I think the numbers were, we lost one person in 8 or something of that scale in terms of our work force. And it certainly was preparations for and rolling out of those cuts. It certainly was all-consuming for managers here in the department. It was a difficult time. So it was difficult to get work done while laying people off. And it was quite an unsettled time, certainly. There just wasn't a lot getting done at that time. It was a difficult time because there wasn't a lot...I mean, environment was well down on the priority list for the government at that time (Anonymous interview E2).

Thus, the 2008-2009 financial crisis provided an opportunity to polarize the economy-environment relationship and politicize carbon pricing. Its aftermath provided a selection moment in which carbon pricing was selected against in relation to the dominant system and its entrenched elements, including the economic integration of free trade, the neoliberal imperative to reduce taxes, and deficit reduction. More deeply entrenched features also influenced this process, including economic growth, national unity tensions, and modern consumerist lifestyles. The result was the rejection of carbon pricing, loss of capacities to address environmental issues, and virtual inaction on the environment.

The cumulative impacts of progressive selection on Canadian environmental governance

At each of these key selection moments, environmental elements were selected against in relation to structurally embedded features of the dominant system, including both elements of neoliberal globalization and deeper elements such as economic growth and consumer lifestyles (Figure 8.2). In response to the 1982-1983 recession, energy conservation and the renewable energy programs of the Conserver Society were defunded, while fossil fuel development continued with the National Energy Program. Meanwhile, critiques of the 1970s that challenged economic growth gave way to the idea that growth could persist, although the nature of growth needed to change. Next, the 1992-993 recession, election, and national unity crisis drove a

change in leadership and agenda priorities that selected for deficit reduction at the expense of environmental programs, policies, and capacities to perform environmental functions. Finally, the 2008-2009 financial crisis initiated events that selected for economic growth and against carbon pricing. It also presented an opportunity to politicize the economy-environment relationship and polarize carbon pricing against tax reduction. Once polarized and politicized, carbon pricing was selected against and rejected.

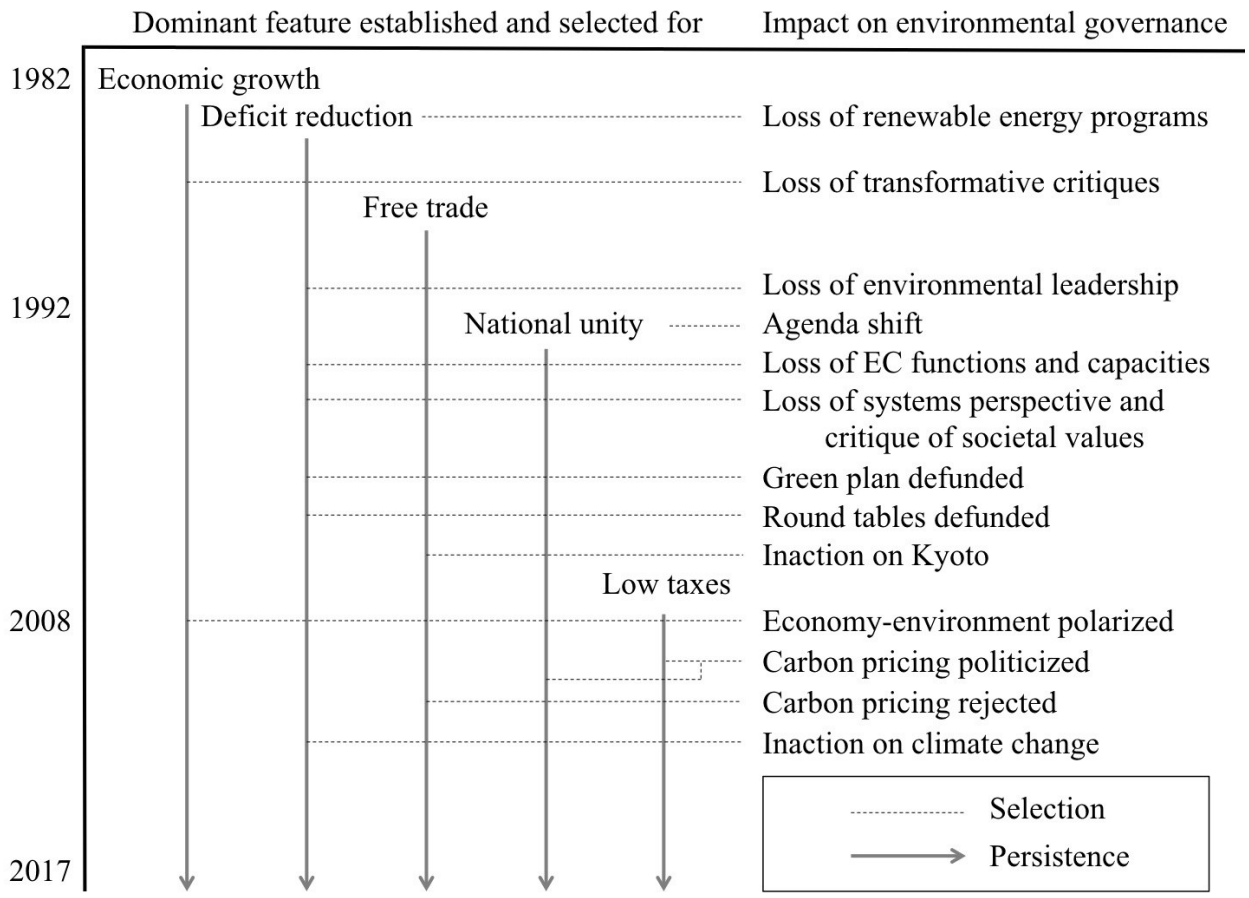

Figure 8.2. Progressive selection in Canadian environmental politics
Dominant features (left) have a significant and demonstrable influence on environmental governance (right), as indicated by dashed lines. EC: Environment Canada

Over the span of these three moments, selection progressed in a clear direction in relation to the dominant system. At each point, selection rejected ambitious environmental ideas, policies, and capacities in favour of entrenched features of the dominant system: free trade and economic integration, deficit reduction, reducing taxes, economic growth, national unity

tensions, and established consumer lifestyles. As a result, the holistic, long-term success of environmental governance in Canada was undermined.

This argument does not suggest that Canada has developed no ambitious environmental policies or has had no leadership on the environment. On the contrary, strong leadership by P.E. Trudeau, Brian Mulroney, and Justin Trudeau, ministers, the public service, and many others have led to ambitious ideas, plans, and policies such as the DOE's system approach, the 1990 Green Plan, and Canadian leadership in Rio and at the Paris Climate Conference.

Rather, progressive selection helps explain how Canada could have developed ambitious environmental policies, but at the same time largely failed to deliver on its promises. As one Canadian climate change NGO expert remarked, "For the last 30 years, what Canada has done is grossly overpromised and grossly underdelivered. We haven't actually done a god damned thing until this government, and it isn't entirely clear that they have either" (Runnalls interview).

Progressive selection has undermined Canada's environmental efforts in spite of leadership and ambitious policies. Although key moments such as economic recessions and national unity tensions are not typically thought of as decisive environmental events, they have had significant and lasting impacts on environmental ideas, policies, and capacities. Progressive selection has resulted in the loss of deeply critical ideas, a transformative systems approach, a deep and mainstream ethical vision, the capacities of Environment Canada to support functions such as environmental education and deliver environmental public services, ambitious programs such as the Green Plan, and forums for multi-stakeholder engagement on the environment and economy such as national and provincial round tables. Canada has lost much of its governmental and societal motivation, leadership, processes, capacities, and cultural momentum to tackle environmental problems.

Conclusion

Progressive selection helps further explain why Canada has been unable or unwilling to take more ambitious action on climate change. Entrenched features of the dominant system have selected for environmental policies to fit with the dominant logic. This argument supports the overarching premise of socio-evolutionary theory that new elements must find fitness with the existing system (Bernstein 2001). However, this study pushes the argument further by demonstrating that selection cannot be explained solely by legitimation in relation to credible

ideas, embedded structures, and identities. Progressive selection was not primarily a conscious and purposeful process of legitimation. Rather, material and political-economic forces also had significant causal influence, indicating co-construction better explains this process than a socio-evolutionary view that foregrounds purposeful human action. Important national events and crises such as global economic recessions, national unity crises, and threats to Canadian livelihoods and Canada's financial viability exacerbated systemic tensions, trade-offs and incompatibilities between environmental aspirations and embedded features of the dominant system. In addition to explicit decisions that favoured the economy over the environment (i.e. economic growth and minimal taxes over carbon pricing), entrenched elements of the dominant system held sway at the expense of the environment through indirect effects such as lack of leadership on the environment, shifts in agenda priorities, inaction, and loss of processes and capacities.

Rather than simply focusing on decarbonization (Bernstein and Hoffmann 2019), this analysis emphasizes the need to also challenge and excavate the underlying features that select for and reinforce both carbon and energy-intensive ways of life, as well as ecologically destructive practices more broadly. The systematic nature of these selective forces calls into question features of the dominant system that hold overwhelming support and normative consensus in modern nation states. Examples include neoliberal ideas of economic integration through free trade, deficit reduction at all costs, and the ideal of minimal taxes. However, more deeply entrenched features are also implicated: the primacy of economic growth and the imperative that the state ensure full employment; a work ethic that views one's profession and economic contribution as their primary source of value and status in society; consumer lifestyles; the primacy of individual freedom as a cultural value; and core ideas of modern capitalism such as private profit, private property, and the idea of prosperity as material progress.

While the societal and ecological merits of each of these features of the dominant system are contested, this research demonstrated how treating them as unquestioned common sense in the face of environmental goals does not bode well for our long-term ability to resolve environmental trade-offs and tensions or to halt ecological destruction. Attending to these features provides a potential leverage point at key moments that could enable policy-makers to make long-term and enduring improvements to environmental outcomes. The prospects for

transitioning to an ecological civilization may be greatly improved if these deeply entrenched features of modern society were questioned, challenged, and excavated.

This analysis also illuminates the need to rebuild and sustain the environmental functions and capacities that have been lost. Transitioning to a sustainable low-carbon economy will require Canadians to work through and resolve many tensions and trade-offs between the economy and the environment. Governance capacities will be definitive because Canada's ability to make headway on big environmental problems may not hinge on the times when it is smooth sailing with strong political leadership and public support, but on the decisions made in the troubled waters of deeply unsettled times.

Chapter 9: Conclusion

This chapter synthesizes the original contributions to knowledge of this thesis and discusses their implications. I begin with an overview of the purpose and specific objectives of this research. Next, I summarize the major findings from each of the chapters. Significant, original contributions to knowledge are then summarized. I identify limitations and future research questions and conclude with a discussion about the implications of this research for policy, practice, and the prospects for change.

Purpose and objectives

The overarching purpose of this thesis was to explain the paradox of growth in Canadian federal politics. In particular, I used Canadian federal politics as a longitudinal case study to interrogate the persistence of economic growth despite rational and ethical arguments that it should not be pursued. The specific objectives of this research were:

1. To map the dominant belief system in Canadian federal politics 1867-2017, and show how the persistence of economic growth as part of that system is a paradox;
2. To develop a conceptual framework to understand how society and nature coevolve, and the role of belief systems in that coevolving relationship;
3. To use this framework to explain the persistence of economic growth in Canadian federal politics; and
4. To identify barriers and opportunities for how Canada can move towards an ecologically sustainable economy and ways of life.

Summary of the research findings

The thesis had three main parts: Part I documented the paradox of growth as a phenomenon to be explained, Part II presented and demonstrated a novel coevolutionary explanation for the persistence of growth, and Part III explored the implications of this explanation for Canadian environmental politics.

Part I used Canadian political manifestos to put forth a two-step empirical argument about the evolution of economic growth as part of the dominant belief system. First, Chapter 3

used Canadian political manifestos to map the dominant belief system 1867-2017. This system was characterized by macroeconomic paradigms separated by interregnums of instability typically called paradigm shifts. However, despite these interregnums many elements established in previous periods of stability were not discarded but retained. Elements accumulated, resulting in the increasing complexity of the dominant system over time. An important question was how and why certain elements were retained, while others were discarded during periods of instability.

Second, Chapter 4 used Canadian political manifestos to explore the specific example of economic growth in relation to the dominant system. Focusing on the economy-environment relationship, I traced the story of economic growth through the historical periods identified in Chapter 3. I argued that the story of growth since 1970 presents a paradox that does not follow logical or moral rationales and cannot be explained by existing theories. The paradox has three main features that warrant explanation: the changing, multi-dimensional nature of growth; the surprising outcome of the 1970s; and the contradictory and seemingly irrational positions of political parties since the 1970s. Thus, the paradox of growth in Canadian politics is a phenomenon to be explained.

Part II developed the main explanatory argument of this thesis. This part developed and demonstrated a coevolutionary explanation for the persistence of economic growth in Canadian federal politics. Chapter 5 developed a theoretical lens to examine the problem and bring it into focus through conceptual integration and synthesis. Using critical realism as a philosophical foundation, it developed the novel Emergent Coevolutionary Framework that identified and proposed the entities and events that together could explain the paradox of growth. In particular, this framework proposed a distinction between settled and unsettled times as characterized by distinct dynamics.

Chapter 6 applied this conceptual framework to explain the story of growth in Canadian federal politics 1867-2017. A complete explanation had to both demonstrate the historical process by which the phenomenon was produced as well as the causal mechanisms that underlie and come together to produce the phenomenon. To this end, this chapter brought together diverse sources of data to demonstrate in detail how the proposed dynamics accounted for the persistence of growth through a sequence of settled and unsettled times. As such, economic growth can be understood as an element becoming increasingly embedded and entrenched in the dominant

system despite attempts at excavation during the unsettled time of the 1970s. Thereafter, economic growth remained largely uncontested and unquestioned common sense for the settled time 1982-2008. I concluded this part by showing how this coevolutionary explanation made sense of the paradox of growth in Canada better than alternatives.

Part III explored in detail the evidence for and implications of this explanation in two periods: the unsettled time 1970-1982 and the settled time from 1982-2008. Chapter 7 provided a detailed examination of the 1970s as an example of an unsettled time. This chapter drew on diverse sources of data including archival records, party platforms, budget documents, speeches, and news articles to understand the intricacies of the 1970s. These sources revealed a surprising result. Not only were leading politicians such as Prime Minister P.E. Trudeau and Conservative opposition leader Robert Stanfield aware of environmental critiques, but they also appear to have taken them seriously. In P.E. Trudeau's case, there is strong evidence that Trudeau and the Liberal government made multiple attempts to implement significant and deeply transformative environmental policies and policy programs. Yet, this chapter also revealed how the 1970s were an unsettled time such that the Trudeau government's ambitions were at first constrained by conventional wisdom, but then wilted under the pressures of sustained and escalating economic, energy, and political crises. Significant features of the post-WWII era were excavated, but the imperative for the government to deliver jobs and growth based on natural resource development was not. The 1970s were thus both a missed opportunity for significant and deeply transformative environmental governance and a cautionary tale of the pitfalls of unsettled times.

Chapter 8 explored the implications of this explanation for the prospects and barriers to Canadian environmental governance in the settled time since the 1970s. Using insights from in-person semi-structured interviews with elites with experience in Canadian politics of climate change and the economy, this chapter argued that the dominant system placed significant constraints on long-term and systemic environmental policy reform. Despite herculean environmental efforts by politicians, senior public servants, and many other key actors in Canada over the last 40 years, the most promising and ambitious of these efforts have been progressively selected against. This process selected against environmental policies and for deeply entrenched features of the dominant system such as economic growth. This process of progressive selection helps to further explain why Canada has been unable or unwilling to take more ambitious action on climate change.

Original contributions to knowledge

This thesis makes significant, original contributions to knowledge in three ways: it contributes to theory for environmental social sciences, it contributes to explaining the paradox of economic growth, and it contributes practical insights about economic growth and the prospects for change in Canada.

Theoretical implications for the environmental social sciences

Theoretical integration was a central component of this thesis, and my main contribution to theory in the environmental social sciences. Integrative efforts in the environmental social sciences are in their infancy. Environmental sociologists and ecological political economists have identified the need to conceptualize society-nature relationships and how they evolve (Brand & Wissen 2013; Bowden 2017). However, while researchers have emphasized the importance of concepts such as complexity, coevolution, and co-construction, it remains unclear how these concepts relate (Geels 2010; Foster et al. 2010; Spash 2012). Researchers have yet to develop the necessary syntheses that integrate these concepts (Spash 2012; Sum and Jessop 2013; Jessop 2015).

Building on critical realist attempts to develop an integrated understanding of society, nature, and how they relate (Reed and Harvey 1992; Lidskog 2001; Carolan 2005; Mingers 2014, Stuart 2016), this study contributed to the project of integration in the environmental social sciences. I synthesized core concepts in a way not yet proposed in environmental sociology and in the environmental social sciences (Gunderson 2016; Spash 2012; Jessop 2015) to develop the novel Emergent Coevolutionary Framework. This framework clarifies society-nature relationships and the role of ideas in those relationships, thus addressing an important gap in the literature (Foster et al. 2010; Gunderson 2015; 2016). Clarifying these relationships provides a first step to understand causality.

This framework also provided a foundation upon which to develop discipline-specific concepts and theories, as well as to situate those theoretical perspectives in relation to one another. Using co-constructivist processes in settled and unsettled times, I demonstrated how the Emergent Coevolutionary Framework can be used to develop discipline-specific concepts and theories. Critiquing social constructivism, I proposed processes of co-construction, where co-construction has previously described concepts, but not processes (Rice 2013), and

constructivism has largely omitted materiality when describing processes (Fuenfschilling and Truffer 2014; Gopel 2016).

Further research is needed to develop discipline-specific concepts as well as ways to iterate between theory and empirical testing. This research would iteratively develop discipline-specific concepts and processes (i.e. co-constructivist processes); empirically test those concepts and processes (i.e. by looking at Canadian politics in settled and unsettled times); check those concepts and processes against insights from other contexts, parallel but distinct social science disciplines, and the natural sciences (i.e. comparative historical studies, but also interdisciplinary critique); and revise the Emergent Coevolutionary Framework as well as discipline-specific concepts and processes to refine them and eliminate refuted claims and incompatibilities. This thesis demonstrates the first iteration of this process. This long-term, iterative, and holistic approach expands the possibility for cumulative theoretical and empirical progress in the environmental social sciences. This process would establish a common vocabulary in the environmental social sciences, and enable interdisciplinary research based on enduring features in the intransitive domain.

Explaining the persistence of economic growth

Building on my theoretical integration, my second significant contribution to knowledge was to develop and demonstrate a novel explanation for the persistence of economic growth. Existing explanations are limited. Constructivist studies of the growth paradigm have provided rich historical data, but fail to explain the causal mechanisms determining why growth persists and why nation states are unable to reject the growth imperative, and in particular during the interregnum of the 1970s (Stein 2001). Materialist explanations highlight the structural dimensions of this phenomenon, but do not adequately explain how structures change during crises and how economic growth persists during those interregnums (Buttel 2004). Thus, economic growth cannot simply be understood as a constructed paradigm on the one hand or an immutable structure on the other.

This study used my Emergent Coevolutionary Framework to explain what others have only observed: that growth is more accurately understood as a multi-dimensional feature embedded and deeply entrenched in the dominant system. Other explanations are unable to account for the fact that the economic growth evolved from being a mere possibility, to a

political strategy, to a structural constraint, and finally to being a fundamental part of Canada's economic reality with multiple dimensions (Schmelzer 2016; Purdey 2010; Buttel 2004). My explanation accounted for the changing, multi-dimensional nature of growth in Canadian politics as a feature becoming embedded and entrenched in the dominant system as it evolves through a sequence of settled and unsettled times.

My integrative framework also enabled me to make a more specific contribution: to better account for and explain periods of stability and change than previous efforts. Classical sociology posits punctuated equilibrium, whereby there are long periods of stability, structural persistence, and only incremental change, interrupted by relatively short phases of rapid, abrupt change that transform society (Boonstra and Joosse 2013). Yet understanding the underlying causes behind these periods of stability and change remains an important research gap (Boonstra and Joosse 2013). My coevolutionary explanation used the distinction between settled and unsettled times and how they come together to better explain the persistence of growth than alternatives that emphasize either periods of stability or crisis.

From a theoretical perspective, this contribution advanced our understanding of crises by conceptualizing and empirically exploring the dynamics of unsettled times. This work built upon work by cultural political economists who have turned to critical realist integration and focused on crises (Jessop 2015). Cultural political economists have characterized crises as progressing through distinct stages that dominated by different processes (Jessop 2012; 2015). This study built on their work by distinguishing between processes that dominate in settled versus unsettled times, but also proposed and explored the coevolutionary selection process produced by the sequence of settled and unsettled times. The historical sequence of settled and unsettled times is crucial to explain the persistence of growth through the 1970s, and illuminates prospects for change.

From an explanatory perspective, I was able to account for both the surprising outcome of the growth debate in Canada in the 1970s and the contradictory and seemingly irrational positions of political parties since the 1970s using the distinction between settled and unsettled times. I explained the surprising outcome of the growth debate in Canada in the 1970s as a coevolutionary selection point of an unsettled time, whereby growth was selected for and further entrenched, while environmental critiques were selected against and did not survive. I explained party positions since the 1970s as the result of two mutually reinforcing processes: actors were

structurally constrained so that alternatives to growth were politically deterred; and new generations experienced pro-growth ideas as unquestioned common sense, leading to the perception that that was the way things are.

Looking more closely at the settled time of neoliberal globalization, this study also pushed Bernstein's (2001) socio-evolutionary argument further by demonstrating that selection in settled times cannot be explained solely by conscious and purposeful human processes of legitimation. Bernstein (2001) does recognize the complementary role of massive disruptions such as crises and upheavals, but the socio-evolutionary explanation focuses on slow processes of evolutionary change that occur during settled times. This study demonstrated that socio-evolutionary selection can only partly be attributed to processes of legitimation (in relation to credible ideas, embedded structures or identities), and that non-human material and destabilizing forces are critical to explaining outcomes, even during the settled time since the 1970s. I showed how important events such as economic recessions, national unity crises, and threats to Canadian livelihoods and Canada's financial viability exacerbated tensions, trade-offs, and incompatibilities between environmental aspirations and embedded features of the dominant system. As a result, progressive selection since the 1970s can be explained in part by legitimation and in part by the coercion of context, crises, and material realities. This observation reinforces the importance of co-construction as a perspective that acknowledges the role of non-human agency and influence beyond the structure-agency framing.

From explanation to action: economic growth and the prospects for change

This research provided actionable insights that can be used to not only explain the persistence of growth but also to identify opportunities and prospects for change. Understanding growth as a feature historically embedded in the dominant system transcends debates about whether or not the modern nation state is inherently anti-ecological and whether economic growth is separable from capitalism (Paterson 2016; Quastel 2016). My historical perspective shifts the emphasis from whether or not the state can be greened to identify the specific dynamics and processes through which anti-environmental features such as economic growth become established and entrenched in the system and why they persist. For example, in contrast to structural explanations such as the Treadmill of Production (Schnaiberg 1980; Buttel 2003), my explanation accounted for the structural shift to neoliberal globalization. Thus, this analysis

revealed the specific structural constraints to sustainability transitions as well as the processes by which those structures were established, are perpetuated, and might change.

Another critical insight was that political factors were more influential than businesses, economists, and the ideas of neoclassical economics, at least during the critical period of the 1970s. Others have argued that neoliberalism undermined the social capacities that enable good environmental outcomes (MacNeil 2016). However, neoliberal explanations were not the whole picture. In contrast to claims of both ecological economists and materialists (Schnaiberg 1980; Purdey 2010; Booth 2004), the influence of neoclassical economists and their ideas was found to be neither necessary nor sufficient to explain the decisions of politicians and outcomes, especially during the 1970s. Instead, I showed that structural and political logics held greater explanatory power. For instance, the political imperative to deliver full employment and its close association with economic growth was a primary cause of the persistence of growth. In his 1971 proposal to cabinet, P.E. Trudeau rejected economic orthodoxy to challenge both the growth imperative and political imperative to deliver full employment. His appeal challenged deeply rooted societal values about the work ethic and the role of the state, and can be seen as an attempt to excavate those entrenched structures. Hence, the political promise to deliver employment and its link to growth plays a central role in the persistence of growth, a conclusion also supported by the Treadmill of Production and growth imperatives of capitalism literature (Schnaiberg 1980; Richters and Siemoneit 2017). This conclusion provides a targeted action that can be leveraged to transform the relationship between states and citizens. However, as the 1970s made clear, although such a transformation may be led and encouraged by governments, it cannot be achieved without much broader societal support and willingness to shift societal values and ways of living.

The coevolutionary perspective further advanced understanding of political lock-ins by identifying political feedbacks and growth imperatives. While political economists have identified the dominant feedbacks that have driven growth since WWII (Fischer-Kowalski and Steinberger 2017), this research identified additional feedbacks from a political nation state perspective. I identified three political feedbacks in Canada: First, the imperative to deliver growth is linked to the political promise to provide jobs. Promising jobs is a political survival strategy that delivers political (electoral) success and thus creates a positive feedback reinforcing the growth imperative. Second, economic growth is linked to the federal contributions for shared

cost programs, which appease national unity tensions. Lack of growth exacerbates these tensions, resulting in a positive feedback that reinforces growth. Third, the imperative to reduce the deficit reinforces the imperative to grow GDP because the deficit is measured as the debt-to-GDP ratio. Without growth, Canada's credit rating will fall, creating a negative feedback that deters strategies besides growth. This research also confirmed the key insight of imperatives of capitalism literature, which argues that the main growth imperative is the state obligation for employment (Richters and Siemoneit 2019; Strunz and Schindler 2018). By identifying these political feedbacks, I contributed to the need for a fuller mapping of the interactions, interdependencies, and barriers that make growth an imperative (Strunz and Schindler 2018). This is important because, while some argue that the dominant feedbacks that drove and locked in growth since WWII are weakening and that states might then be able to move away from growth-based economies (Fischer-Kowalski and Steinberger 2017), such attempts must also account for these political feedbacks.

Limitations and future research

This research encountered several important limitations. First, the type and availability of data significantly limited the ability to provide a more detailed analysis of the phenomenon in question. On the one hand, political manifestos provided a consistent longitudinal data source, but with limited ability to provide insights for explanation. As I argued in Chapter 3, manifestos provided a reliable way to identify the dominant belief system and broad trends in thinking. However, manifestos were unable to capture the detailed positions and perspectives of groups and individuals that stray from partisan positions as well as shifts in between elections. Likewise, they were unable to provide insights into the decisions and motivations of political actors.

On the other hand, interviews with elites who possess extensive experience in Canadian politics of the economy and the environment provided rich and detailed first-hand accounts of perspectives, positions, decisions, and motivations. However, these interviews were also limited by the age and availability of participants. Compared to recent decades, few people were still available to provide first-hand accounts of the 1970s. A person who was 30 years old in 1970 would be 80 years old in 2020, and likely held a relatively junior position in public service or politics in the 1970s. As such, few people were able to provide first-hand accounts of the critical unsettled time 1970-1982. This gap was partly addressed using archival and news sources.

Nevertheless, further research is needed to understand what happened in Canada in the 1970s. Further research might seek to identify the rationales and motivations of P.E. Trudeau, the Liberal cabinet, and Canadian and international actors such as Maurice Strong and Jim MacNeill between 1968 when P.E. Trudeau was first elected and 1987 when the Brundtland Commission issued its report. Research might also explore the role and influence of the Club of Rome in Canada and in other countries such as Sweden, the Netherlands, and the United States using archival and news sources, or first hand accounts where available.

Second, the scope of this study was limited to a longitudinal case study in Canada for practical reasons. The extent and depth of the dominant belief system was artificially bounded by the 150 years that Canada has been a sovereign nation state and constrained to the concept of economic growth. As a result, this study was unable to fully interrogate the historical foundations of modern ontology and their ecological dimensions. Instead, this research only identified the broad outlines of the ecological problems of modern globalized civilization. The interrogation of economic growth could be expanded to include closely linked elements or entire complexes, such as the state responsibility to ensure employment, free trade, deficits, capitalism, consumerism, private profit, and sovereignty. Moreover, the dominant belief system clearly extends much deeper, and its anti-ecological ontological foundations extend with it. This analysis could be extended to examine other features of modern societies or interrogate how and why even more deeply entrenched ontological features of modern civilization persist and how they might be changed. Future studies might use the sociological approach I have developed to interrogate deeply entrenched layers that drove the transition towards modernity itself. The deep roots of the ecological dilemma implicate the ontological presuppositions of modern society, including Anthropocentrism, the domination of nature, reductionism, mechanistic thinking, rational individualism, Cartesian dualism, the idea of prosperity as material progress, the morality of private profit, and others.

Third, this study was a proof of concept, intended to test and validate the conceptual framework rather than to be a definitive and irrefutable explanation. An important question is to what degree are the proposed processes and patterns generalizable beyond Canada, other Western countries, and beyond the recent modern period. More work is also needed to theorize how unsettled times work and to understand them in practice. The processes and dynamics of unsettled times remain poorly understood, as does the potential for unintended consequences and

the best strategies for navigating these dynamics. Further historical research is needed to test this distinction between settled and unsettled times using both longitudinal studies that compare between sequences of settled and unsettled times within single cases, and comparative historical studies of either relatively more or less unsettled times. Longitudinal studies need to further interrogate the proposition about which dynamics dominate in these periods, as well as the proposed progressions from settled to unsettled times and back again. Further research is needed to more clearly identify the sub-stages of settled and unsettled times, as well as how their sequencing produces the observed results. Comparative case studies are needed to complement this longitudinal approach so as to better understand which dynamics and processes are unique or generalizable. These studies would be particularly revealing because "in periods of transition or crisis, generative structures, previously opaque, become more visible to agents" (Jessop 2015, p245 quoting Bhaskar 1979, p152). It would be particularly revealing to compare the similarities and differences between endogenous drivers such as social movements and revolutions and exogenous drivers such as crises as well as how they relate. How we understand unsettled times is crucial to how society evolves because this knowledge will be instrumental to our ability to navigate towards more ecological, low-carbon economies and ways of life. Thus, rather than being the last word, this research is intended to open up conversations on how best to understand and navigate these complex coevolutionary processes.

A final limitation and potential avenue of research is the degree to which the proposed dynamics and processes are co-constructed and can themselves be shaped through human knowledge and action. Clearly, some basic underlying processes, entities, and causal mechanisms determine or bound the long-term sociological dynamics and processes I have identified. However, these physical, ecological, biological and social psychological constraints provide a vast playground with which people individually and collectively shape and co-construct larger sociological processes and dynamics. Eschatological ideas in revolutions provide a critical example of how cultural knowledge contributes to co-construction. Eschatological thinking understands history as moving to a particular time, "a time of judgment and destruction, from which a new, superior order will emerge" (Goldstone 1991, p434). Goldstone (1991) shows how early modern revolutions only took form with the emergence of eschatological thinking: when it was absent, leaders were replaced but the existing system was left alone, but when it was available in the culture, revolutionary leaders turned to eschatological imagery to describe the

revolutionary struggle and task of reconstruction. While the underlying causal mechanisms of different periods such as collapse, crisis, transformation, revolution, or social movement may be the same, cultural metaphors actually influence how these times are navigated, their type, and the stages by which they unfold. Further research is needed to understand the potential degree to which human societies can shape or reconstruct the macro-dynamics and processes of their societies and relationships with the Earth.

Broader implications for policy and practice

Navigating settled and unsettled times

Any attempt to seriously address climate change and the global ecological crisis must account for the coevolutionary dynamics which countries such as Canada encounter, as well as the specific processes and dynamics that dominate in settled and unsettled times. Accordingly, processes that dominate in settled times include multi-dimensional embedding, sedimentation, layering, entrenchment, and reproduction. Through sedimentation, elements become increasingly embedded in lower levels (i.e. materialized) but also interconnected and diffused throughout the system. Layering in turn acts to link, stabilize and perpetuate features in relation to social wholes. Since more superficial or recently established layers are premised upon and presuppose deeper layers, as an element becomes layered into the system this results in increasing integration of a feature into the system over time. Any attempt to challenge or change an element will encounter resistance from the "weight" of layers presupposed upon that established element. Through entrenchment, positive feedbacks mechanisms maintain, expand, or reproduce the element or the system it is part of. Entrenched elements feedback as embedded ontologies, to be reproduced and spread as long at the system persists. Those feedbacks will tend to reproduce elements and the system unless they are disrupted. Finally, through reproduction, elements embedded in social and material systems "echo back," are internalized as "the way things are," and in turn are externalized anew through shared ideas, social practices, and material changes. Together, these processes describe how elements become embedded and entrenched in the dominant system, as well as interact to produce and reproduce that system.

During unsettled times different dynamics dominate, including destabilization, disruption, and excavation. Destabilizing forces include internal crises and external shocks to the

system; both disrupt the continued ability of existing strategies to yield expected results. Excavation is the opposite of sedimentation, and is a dynamic in which elements are progressively contested, de-legitimated, opposed, and disrupted through a process of increasing escalation. Destabilization and excavation combine to drive dynamics in unsettled times. Any serious consideration of the prospects of a deep ecological transition must account for these path-dependencies, the distinct dynamics of settled and unsettled times, and how these settled and unsettled times come together in sequences over time.

Constraints in settled times

One important implication of this analysis is that the prospects for change are greatly limited in settled times. Indeed, this research revealed the extent to which Canadian politicians, public servants, NGOs, and others have toiled in the trenches for decades. They have taken leadership in advocating for more ambitious environmental policies and approaches both domestically and globally; they have built coalitions to support those objectives; and they have developed and implemented environmental policies. However, this research indicates that, on their own, such incremental approaches are insufficient to achieve the transformative environmental change required. Although there are examples of rapid shifts in policy such as smoking, deficit reduction, and free trade, those shifts aligned with the dominant system and its logic. In contrast, transformative environmental changes have often been at odds with the dominant system and its dynamics, implicating the need to transform that dominant system itself.

At the same time, this analysis illuminates the need to systematically rebuild and sustain the ecological functions and capacities that have been lost through progressive selection under neoliberalism. Rather than placations that the economy and environment go hand-in-hand, transitioning to a sustainable low-carbon economy will demand the federal government, provinces and all Canadians to work through these deep tensions and trade-offs between the economy and the environment. If neoliberalism has undermined Canada's social support systems, leaving citizens vulnerable to demagoguery and populist rhetoric that polarizes the economy-environment relationship and politicizes carbon pricing (MacNeil 2016), Canada's capacities both to collectively work through social and ecological issues and to make deeply reflective and meaningful collective decisions have also been degraded. Since the 1970s, neoliberalism has undermined the relationship between government and citizens, even while

civic engagement, political participation and citizens' trust in government have suffered. For example, voter turnout in Canada declined from 79% in 1963 to 61% in 2011, and more precipitously since 1988 (Turcotte 2015). Rebuilding these relationships and governance capacities implicates the need for environmental education programs; public services that support community engagement and political action; non-partisan forums to engage citizens in working through the economy-environment relationship; local, national, and international political leadership; and fresh visions for how human communities can meaningfully relate to the environment. Developing such capacities will reduce the tensions and trade-offs as we attempt to work through the economy-environment relationship.

The prospects and opportunities of unsettled times

This research demonstrated several important insights about unsettled times in Canada that illuminate both distinct dangers and opportunities for deeper excavation. First, destabilizing forces had a crucial influence for the onset and persistence of unsettled times. The unsettled time from 1929-1945 was brought on by the stock market crash and Great Depression, while stagflation and energy crises of the 1970s originated in the international economic system and OPEC respectively. These examples emphasize the important influence of external destabilizing forces for the onset of unsettled times. Second, in the face of persistent destabilizing forces, unsettled times were characterized by a complex process of searching for solutions to societal problems as well as escalation from questioning and challenging common sense, towards increasing excavation. In both the Great Depression – WWII and 1970s eras, persistent problems such as unemployment, stagflation and energy crises led to sustained social unrest and escalation. During the Great Depression, unemployment escalated, moving from proposals within the conventional wisdom of National Policy thinking in 1930 to increasing calls for redistribution in 1935, to a new relationship with the international economy in the aftermath of WWII. Similarly, in response to stagflation and energy crises, the search for solutions escalated and moved from solutions within the conventional wisdom of the Phillips curve in 1972 towards calls for redistribution and calls for wage and price controls in 1974, to excavation of much of the conventional economic wisdom of the previous period. This analysis suggests that unsettled times such as crises present greater opportunities for excavation and deeper transformation than are available during settled times.

However, unsettled times were also cautionary tales in which decision-makers were unable to achieve desired outcomes and faced unintended consequences. The success of policies and ideas during these unsettled times did not reflect an obvious rational or moral logic, but were instead driven by destabilizing forces, crises, and escalating problems. In both instances in this study, transformative policies such as Bennett's new deal and Trudeau's aspirations for a Department of the Environment with overarching mandate and powers were attempted but failed. During these periods, politicians may be at a loss for what to do, searching for and imposing solutions that have unintended consequences. For example, during the Great Depression, unemployment, social unrest and the emerging fear of fascism drove the subsequent imperative of full employment as part of the post-WWII growth-based agenda. Likewise, during the 1970s, stagflation and energy crises increased the national deficit and inflamed national unity tensions, which shaped and constrained the government's decisions during the late 1970s and early 1980s. As a result, unforeseen dynamics and unintended consequences that emerge during unsettled times may determine how society reacts and its subsequent direction.

Moreover, the dynamics and unintended consequences that dominate during unsettled times have significant influence on the anchors that establish the direction of subsequent settled times. In both unsettled times in this study, comprehensive programs acted as anchors that aided the return to settled times and laid the foundations for societal reorientation. For both the Canadian White Paper on Income and Employment and the MacDonald Commission, attempts to find solutions during previous unsettled times had clear influence on the shape and direction of the subsequent settled times. Key sources of legitimacy in relation to crises and reactions to those crises drove these resolutions. The post-WWII consensus was driven by both fear of fascism and the newly realized optimism around growth as a panacea. Neoliberal globalization was driven by the intersecting influence of business mobilization, neoclassical economists, the perceived de-political nature of the MacDonald Commission, and the need for solutions to stagflation. Therefore, these observations lend both credence and caution to Winston Churchill's maxim "never let a good crisis go to waste," the strategy used by Milton Friedman and others to bring about the shift to neoliberalism (Klein 2007).

The way forward for Canada: economic growth and ecological transformations

This analysis indicates that Canada in 2020 is in an unsettled time, with the economy-environment relationship a central issue that refuses to be resolved. At least since 2008, Canadian politics has been aflame with contentious issues that link the economy and the environment, livelihoods, and visions of prosperity. Oil pipelines and carbon pricing are two issues that reveal eerie parallels between the present period and previous unsettled times. These issues have remained unresolved, and have only escalated since 2008. The federal government has committed to the Paris Agreement through its Pan-Canadian Framework on Clean Growth and Climate Change. But despite initial acceptance and its claim to resolve contradictions between the economy and the environment, its core feature – carbon pricing – has faced increasing opposition from provinces on economic grounds. A wave of provincial premiers elected with mandates to support energy and natural resource development have opposed and challenged the federal carbon pricing plan. The result has been increasing escalation through Western alienation, legal battles, and activism. In early 2018 the Kinder-Morgan Trans Mountain Pipeline controversy placed advocates for the economy and environment against one another, sparked a trade spat between the provinces of British Columbia and Alberta, and forced the federal government to intervene and buy the pipeline. Significant factions are pushing for energy and natural resource development projects, while other groups are pushing the opposite direction, resulting in conflicts such as recent Trans Mountain Pipeline protests and polarization around and cancellation of the proposed Teck Resources Frontier mine. Canada continues to wrestle with these unresolved tensions between the economy and the environment.

As these problems persist and debates escalate, political proposals increasingly challenge the conventional wisdom of neoliberal globalization. Neoliberal tenets, such as the idea that deficits must be eliminated and avoided and that free trade is preferable over tariffs, have been broken and flaunted by Trudeau and Trump respectively. Meanwhile, international organizations such as the IMF have rejected neoliberal premises that deficit reduction, a smaller state, and privatization are inherently better (Ostry et al. 2016). Yet, as in past unsettled times, these debates remain unresolved because the underlying problems persist, while no new macroeconomic paradigm has been agreed upon.

Despite these parallels, there are important differences between past periods and the current unsettled time. The environment has greater and more widespread support than in the

1970s, holding promise for such transformative environmental agendas. In the 1970s, the OPEC oil crisis combined with economic issues to create line-ups at the pumps and raise living costs. Canadians were mobilized on energy and the economy, with union strikes on inflation, whereas only relatively small fringe groups advocated for environmental issues. Canadians are now more aware of and mobilized on the environment than in the 1970s. Specific groups such as First Nations and youth movements such as Extinction Rebellion are highly mobilized, while the general population is engaged or at least informed. For example, in 2019 climate change became a top election issue, and climate marches have drawn increasing numbers of supporters. For this reason, environmental issues are more likely to become a core feature of any deep transformation than in the past.

In addition, environmental challenges to the status quo are much deeper than in the 1970s, and thus hold potential for more transformative excavation. In the 1970s, challenges to conventional wisdom were primarily economic, while recent Canadian conversations seek to address unresolved tensions that drive to the heart of Canadian national identity, sovereignty, and relationship to the land. These critiques target economic growth, capitalism, and the modern view of prosperity as material progress. For instance, a November 8, 2019 article in the Guardian entitled *Capitalism is in crisis. And we cannot get out of it by carrying on as before* declared, "Even capitalists agree our economic model is broken. Fundamental change on the scale of 1945 and 1979 is needed now" (Jacobs 2019). In Canada, this need for fundamental change translates to widespread recognition about the need to work through tensions between the economy and the environment. For example, when Teck Resources cancelled their proposed oil sands development in February 2020, they emphasized the need for a national conversation to resolve issues of climate change: "It is our hope that withdrawing from the process will allow Canadians to shift to a larger and more positive discussion about the path forward. Ultimately, that should take place without a looming regulatory deadline" (Teck Resources Ltd. 2020, p2).

Elsewhere, larger discussions about the path forward are already underway. Since the 2008-2009 financial crisis, there has been a flurry of global activity and the emergence of new thinking challenging economic growth and proposing new visions of prosperity, as well as entirely new economic visions. In 2011, Bhutan put forth a United Nations resolution for a new development paradigm based on happiness and wellbeing rather than GDP (Costanza et al. 2020). It passed unanimously. This initiative led to the creation of the Wellbeing Economies

Alliance (WEAll) in 2018, and a partnership of national governments (WEGo) in support of wellbeing economies. At the same time, new organizations such as the New Economy Coalition, the Sustainable Prosperity Institute, the Institute for New Economic Thinking, and The Next System Project have emerged to challenge economic orthodoxy from a systemic perspective and to propose alternatives.

These discussions provide ideas and inspiration for alternative visions with the potential to resolve tensions between the environment and the economy. The Green New Deal (GND) is one potential anchor that encompasses these ideas and alternative visions. However, the degree to which the GND reflects sufficiently deep and ecological excavation is unclear. Interpretations of the GND range from neoliberal to challenging the logic of capitalism and rejecting the growth-based economy (Jessop 2012). Thus, comprehensive policy programs such as the GND hold much promise, but there is also a risk that they may act as stop-gap measures; they may not only stave off the instability and social unrest of an increasingly unsettled time, but also the potential for deeper excavation and transformative change that could otherwise occur. This caveat is important because the complexity of the ecological crisis means that, without sufficiently deep excavation, new macroeconomic policy proposals are unlikely to provide the transformation necessary for long-term stability and ecological integrity. What core features would a sufficiently transformative anchor include? And what other visions warrant attention as either viable environmental alternatives or as visions that threaten to anchor a new period without resolving tensions between the environment and the economy?

We have been thrown into the current of another unsettled time and have no choice but to navigate as best we can. Unsettled times are fraught with crises, unintended consequences, and complex dynamics. There is a risk that destabilization, escalation, and excavation may not play out in favour of transformative environmental agendas. And it remains to be seen whether the driving focus will linger on resolving the relationship between the environment and the economy, or shift towards other crises as in previous periods. Here, perhaps, is a strategic pressure point with transformative potential. The current situation presents a unique opportunity to deal with underlying tensions and trade-offs between the economy and the environment, and to bring about a better world.

Climate change and the Anthropocene: a deeply unsettled time

The global ecological crisis, characterized by climate change, sea level rise, ocean acidification, a sixth mass extinction, promises an even more deeply unsettled time than previous periods (IPCC 2018). These changes threaten to destabilize global and local systems through mass displacement and migration, conflict and war, and disruption of agriculture, food and water provisioning, energy systems, transportation, and supply chains.

The global ecological crisis presents a further scenario of troubling import: what if things do not settle? Human impacts have already resulted in a much degraded (IPCC 2014; 2018) and potentially uninhabitable Earth (Wallace-Wells 2019). One possible scenario is that runaway feedbacks could push the Earth System past planetary thresholds and prevent stabilization of the climate at low or intermediate temperature rises, resulting in a "Hothouse Earth" (Steffen et al. 2018). Under such a scenario, even international re-sets like the creation of the Bretton Woods Institutions and the United Nations may be insufficient adjustment. In the face of the global ecological crisis that threatens ongoing unsettled conditions, how can we navigate in ways that avoid even further ecological impoverishment and collapse?

Appendix A: Data Sources

Archival sources from Library and Archives Canada and the Trent University Archives

Archival sources included documents from Library and Archives Canada (LAC) and the Policy Advisory Committee to Robert Lorne Stanfield fonds (1963-1975) (PAC) in the Trent University Archives. Specific collections accessed at Library and Archives Canada include:

Pierre Elliott Trudeau fonds, MG26-O, R11629-0-8

Progressive Conservative Party of Canada fonds, MG28-IV2

Alastair Gillespie fonds, R1526-O-6

The Canadian Association for the Club of Rome fonds, R13167-0-0-E

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