

DISTORTING THE REALITY OF CLIMATE CHANGE:  
ANTI-REFLEXIVE NARRATIVES OF CONSERVATIVE THINK TANKS IN  
CANADIAN NEWSPAPERS

A Thesis

Submitted to the Faculty of Graduate Studies and Research

In Partial Fulfillment of the Requirements

For the Degree of

Master of Arts

in

Sociology

University of Regina

By

Curtis James Shuba

Regina, Saskatchewan

July 2019

Copyright 2019: C. Shuba

**UNIVERSITY OF REGINA**  
**FACULTY OF GRADUATE STUDIES AND RESEARCH**  
**SUPERVISORY AND EXAMINING COMMITTEE**

Curtis James Shuba, candidate for the degree of Master of Arts in Sociology, has presented a thesis titled, ***Distorting the Reality of Climate Change: Anti-Reflexive Narratives of Conservative Think Tanks in Canadian Newspapers***, in an oral examination held on May 13, 2019. The following committee members have found the thesis acceptable in form and content, and that the candidate demonstrated satisfactory knowledge of the subject material.

External Examiner:           \*Dr. Debra Davidson, University of Alberta

Supervisor:                    Dr. JoAnn Jaffe, Department of Sociology & Social Studies

Committee Member:         \*Dr. Sarah Britto, Department of Justice Studies

Committee Member:         Dr. Amber Fletcher, Department of Sociology & Social Studies

Chair of Defense:            Dr. Emily Eaton, Department of Geography & Environmental Studies

\*via ZOOM Conferencing

## **Abstract**

Despite the existential threat to life on this planet posed by climate change, many North Americans continue with ‘business as usual’. While the substance of the debate is different, in each country awareness of the gravity of the situation seems lacking. Given that the perception and meaning of reality determines how it is acted towards, this thesis examines how climate change in Canada has come to be discursively constructed so that its reality is recognized, but its seriousness is overshadowed by other issues.

Western society is transitioning from modernity into reflexive modernization whereby pre-existing institutions and underlying principles are challenged (Beck, 1994). This is amplified by impact science that exposes inherent contradictions of the dominant social paradigm. In response, anti-reflexive forces promote discourse defending the current system to undermine attempts to change the status quo (i.e., reflexive forces). The struggle to construct meaning is contested and opposing forces vie for symbolic and cultural capital in the field of climate change.

This thesis analyses the social construction of climate change in Canadian news-media. The research is guided by the ontological and epistemological assumptions of critical realism and seeks to elucidate a causal mechanism, its underlying structure, and the conditions that interact to manifest climate change discourse specific to Canada. A content analysis of two Canadian newspapers and two Canadian conservative think tanks was administered to reveal frequent thematic frames and claims, contextualize text, capture narratives, and determine prominent actors and institutions. These results were subjected to the processes of abduction and retroduction to explain underlying mechanisms. Abduction primarily relied on Beck’s (1994) theory of reflexive

modernization, McCright and Dunlap's (2010) anti-reflexivity thesis, Bourdieu's (1998) practice theory, and Freudenburg's (2005) double diversion theory. Reflexive and anti-reflexive discourse were found but their usage varied substantially by data source, quantitatively and qualitatively. The socio-historical conditions of the Canadian context were found to influence the causal powers of the anti-reflexive mechanism, producing discourse specific to Canada. These findings contribute to the literature of climate change discourse.

*Keywords:* climate change, Canadian news-media, anti-reflexivity, reflexive modernization, impact science, critical realism, practice theory, fields, content analysis, climate change discourse, dominant social paradigm

## Acknowledgements

I would like to thank Dr. JoAnn Jaffe for continually pushing me to do better while providing the tools and support to do so. For the many fascinating and enlightening conversations and her unique ability to inspire confidence when I could not muster it on my own. I am forever grateful.

I would like to thank my thesis committee members, Dr. Amber Fletcher and Dr. Sarah Britto, for their expertise and guidance through this process. Your contributions have truly enhanced the quality of this work.

I would like to thank Dr. Davidson for serving as the external examiner, and for her thorough review of this thesis. Her participation and recommendations significantly improved the final product.

I want to thank Dr. Polo Diaz. The motivation and ideas for this thesis originated in his courses. He retired shortly thereafter and left me boxes of books, many of which informed this work. This gift remains the kindest I have received.

I would also like to acknowledge the University of Regina and the Department of Sociology and Social Studies. It has been a pleasure to work and study with such warm and kind individuals striving to make the world better.

## **Dedication**

This work is dedicated to my amazing and supportive family and friends. To my caring parents who inspire me with their perseverance and hard work. My mother who never quits and my father who would do anything to see his children succeed. To my love, Cait, who has supported me through the most difficult stages of this thesis. You are beautiful inside and out and make this world a better one to live in. To my brothers and sisters for their support and friendship. To my nephews who lift my spirits when I am feeling overwhelmed by it all. I am motivated to preserve and improve the world we live in so you can live long, full, and happy lives. And finally, to my best friend and companion Eugene. You have never left my side and are always there to calm me down when frustration takes hold. My greatest insights have come during our many walks.

## Table of Contents

Abstract .....	i
Acknowledgements .....	iii
Dedication .....	iv
List of Tables.....	vii
List of Charts .....	viii
List of Figures .....	ix
List of Appendices.....	x
List of Abbreviations.....	xi
Chapter 1: Introduction .....	1
1.1 Background and Context .....	4
1.1.1 Natural science and public concern. ....	4
1.1.2 Politico-economic conditions in Canada. ....	6
1.2 Purpose Statement and Research Questions .....	11
1.3 Axiological Considerations .....	11
1.4 Rationale and Significance .....	12
1.5 Organization of Thesis.....	13
Chapter 2: Literature Review .....	14
2.1 Role of the Media .....	14
2.2 Media Coverage of AGW .....	18
2.3 Media Coverage of AGW in Canada.....	20
2.4 The Role of Counter-Movements in Canada.....	24
2.5 Sociological Theory.....	25
2.5.1 Reflexive modernization: Socio-historical conditions.....	25
2.5.2 Anti-reflexivity: Resisting change. ....	29
2.5.3 Practice theory: Fields of struggle. ....	36
2.5.4 Double diversion: The role of power. ....	38
2.6 Conclusion .....	40
Chapter 3: Methodology and Method .....	41
3.1 Methodology: Guiding the Approach.....	44
3.2 Methods .....	47
3.2.1 Description.....	47
3.2.2 Analytical resolution.....	47
3.2.3 Intensive analysis, abduction, and retroduction.....	59
Chapter 4: Finding and Results .....	62
4.1 Findings .....	63
4.1.1 Population and sample characteristics. ....	63
4.2 Extensive Results: Tendencies in the Data.....	70
4.2.1 Thematic frames.....	70
4.2.2 Voices. ....	73

4.2.3 Anti-reflexive and reflexive results. ....	77
4.3 Intensive Results .....	84
4.3.1 Topics and trends. ....	84
4.3.2 Reflexivity.....	87
4.3.3 Anti-reflexivity. ....	88
4.3.4 Key AR individuals and organizations. ....	107
4.4 Conclusion .....	113
Chapter 5: Discussion.....	115
5.1 Anti-Reflexive Forces: A Reactionary Movement. ....	121
5.1.1 Membership and funding. ....	123
5.2 The Dominant Social Paradigm.....	126
5.3 Causal Powers and Liabilities.....	131
5.4 The Symbolic Struggle Over AGW Framing .....	134
5.4.1 Framing environmentalism as a threat to social progress. ....	139
5.4.2 Anti-regulation and anti-corporate liability claims.....	141
5.4.3 Diversionary reframing. ....	144
5.4.4 Scientific uncertainty. ....	146
5.5 Conditions.....	148
5.5.1 Anti-reflexivity in Canada .....	148
5.5.2 Political economy.....	150
5.5.3 Canadian media.....	151
5.6 Conclusion .....	152
Chapter 6: Conclusion .....	154
6.1 Further Research into a Wicked Problem.....	156
6.2 Limitations of this Study .....	160
6.3 The Last Word .....	161
References .....	162
Appendix A – Data Set.....	184
Appendix B – Coding Guide.....	208
Appendix C – Intercoder Reliability Tests.....	218

## List of Tables

Table 1: Anti-Reflexive Claims .....	52
Table 2: Reflexive Claims.....	55
Table 3: Thematic Frames.....	57
Table 4: Articles Produced by Newspaper.....	64
Table 5: Fraser Institute Board of Directors with Fossil Fuel Connections.....	111

## List of Charts

Chart 1 – Sample Coverage by Week .....	66
Chart 2 – Articles by Section .....	69
Chart 3 – Thematic Frames .....	72
Chart 4 – Journalistic Source by Profession .....	74
Chart 5 – Individual Voices .....	76
Chart 6 – Anti-Reflexive vs Reflexive Presence .....	79
Chart 7 – Anti-Reflexivity as a % of Total Articles .....	81
Chart 8 – Reflexivity as a % of Total Articles .....	83

## **List of Figures**

Figure 1 – Structures of Causal Explanation .....	117
Figure 2 – Structures of Causal Explanation for AGW .....	120
Figure 3 – Structure of Inaction .....	159

## **List of Appendices**

Appendix A – Data Set .....	184
Appendix B – Coding Guide.....	208
Appendix C – Intercoder Reliability Tests .....	218

## **List of Abbreviations**

AGW	Anthropogenic Global Warming
CR	Critical Realism
CTT	Conservative Think Tank
DSP	Dominant Social Paradigm
GHG	Greenhouse Gas
G&M	Globe and Mail
NP	National Post
AR	Anti-Reflexive
RF	Reflexive

## Chapter 1: Introduction

In the early 1990s, a counter-movement formed to defend conservative ideals, and the economic and political interests of fossil fuel capital, in particular, against efforts to mitigate anthropogenic global warming (AGW). Shortly after the 1992 United Nations Conference on Environment and Development in Rio, various conservative organizations in the United States (U.S) coalesced to pool their resources and establish a common front (Jacques, Dunlap & Freeman, 2008). Today this coalition consists of think tanks, foundations, media, public intellectuals, and fossil fuel interests - each serving a specific purpose (Brulle & Dunlap, 2015; Dunlap & McCright, 2008). Conservative think tanks (CTTs) coordinate the movement, play a key role in both legitimizing and promoting its ideals, and address prominent threats - such as the inherent reflexivity of climate science which considers the role of fossil fuel exploitation in generating AGW (Brulle, 2014; McCright & Dunlap, 2010). They seek to undermine the science of AGW through manipulation and obfuscation of discourse in the public arena and have been largely successful in this, stalling political action and influencing public opinion in the U.S. (Brulle & Dunlap, 2015; Hoggan & Littlemore, 2009; McCright & Dunlap, 2000, 2003; Oreskes & Conway, 2010). These organizations and their efforts are concrete manifestations of ‘anti-reflexivity’ (AR); that is, they oppose reflexive (RF) social mechanisms transforming the principles and institutions of modern society. AR is supported financially by fossil fuel capital and conservative foundations (Brulle, 2014) and culturally by conservative news-media who provide multiple platforms for disseminating CTT literature and legitimizing sceptic individuals (Neubauer, 2011).

Canada's political leaders have a long history of disingenuous mitigation goals (Doern, Auld, & Stoney, 2015; Simpson, Jaccard & Rivers, 2007). The Kyoto Protocol, for example, was ratified in 2002, but no effective plan to meet it was established and the country withdrew nine years later; Canada was the only country to do so, while the U.S. refused to ratify it. In 2013, Environment Canada projected emissions to be 121% of the 2009 Copenhagen Accord and 160% of the Kyoto Protocol commitments by 2020, barring any changes at the time (as cited in Stoddart, Haluza-DeLay, & Tindall, 2016). Prime Minister Trudeau's nationwide carbon tax, which began in 2019, has faced continual resistance from provincial (Stone, 2019) and federal conservative leaders (CBC, 2019) from the onset.

The Conservative and Liberal political parties – historically, the governing parties that form Canada's federal government - both respond to public pressure to address AGW but neglect the issue when public attention recedes (Macdonald, 2008). Canada's history of failing to establish strong environmental policies and maintain them, at any governing level, results largely from fossil fuel interests' willpower exceeding that of the environment movement (MacDonald, 2008). Willpower alone, however, cannot garner support for one movement or another. Support is inevitably connected to understandings and beliefs. This leads to the underlying question guiding this thesis: why has public attention been insufficient in pressuring politicians to act thus far, considering the dire threats posed by AGW, and the continual warnings of natural scientists? Does AR discourse exist in Canadian news-media and is there a counter-movement, like in the U.S., that disseminates it to influence public opinion? The study conducted here primarily addresses the latter questions by examining AGW discourse in Canadian news-

media to ascertain whether AR claims and frames are present and, if so, to determine the actors and institutions responsible for constructing and promoting them. This research adds to AR literature and accepts Dunlap and McCright's (2015, p. 321) call for additional research into the denial counter-movement's strategies, tactics, and components across nations.

It has been demonstrated that the presence of AR discourse influences public opinion of AGW in the U. S. and plays a significant role in producing public inaction toward it (McCright & Dunlap, 2000, 2003). Determining the presence (or absence) of AR in Canadian news-media provides a deeper, more nuanced, understanding of public inaction toward the threat of AGW. AGW and public inaction are both 'wicked' problems (Dunlap & McCright, 2015); they have a multitude of dynamic influences, are intractable, and require an interdisciplinary, or transdisciplinary, approach (Batie, 2008). Therefore, AR discourse is only one mechanism among others constituting public inaction. Determining how AR discourse manifests in news-media – that is, the particular construction of AGW it promotes - provides insight into its constitutional role in inaction. It is also worth noting that this thesis is a small part of a larger undertaking to develop a holistic understanding of public inaction toward AGW. The ultimate goal of the larger undertaking is to produce a model of public inaction toward AGW that delineates and elucidates the causal mechanisms and conditions interacting to manifest it. This thesis and the exploration of AR in Canadian news-media represent the first step in accomplishing this.

Working within the philosophical framework of critical realism (CR), this study engages in 'critical methodological pluralism' which includes both extensive (i.e.,

quantitative) and intensive (i.e., qualitative) methods. This research uses a content analysis of two nationally distributed newspapers and the published writings of two CTTs between July 1, 2015 and July 1, 2016 to (1) determine the frequency of: (a) AR claims relative to RF claims, (b) individual sources of information (quoted or paraphrased), and (c) institutional sources of information (quoted or paraphrased); and (2) to provide an analysis of AR strategies, to understand the factors influencing their specific manifestation within the Canadian context.

## **1.1 Background and Context**

**1.1.1 Natural science and public concern.** Climate scientists assert that human activities are substantially disrupting naturally-occurring (historical) fluctuations of the earth's climate (Anderegg, Prall, Harold, & Schneider, 2010; Cook et al., 2013; Doran & Zimmerman, 2009; Oreskes, 2004) in ways that, without mitigation, will lead to “substantial species extinction, global and regional food insecurity, consequential constraints on common human activities, and limited potential for adaptation” (IPCC, 2014, p.19). The IPCC (2014) finds that the effects of AGW are already manifesting in sea rise, changing precipitation patterns, increased ocean acidification, enhanced rate of extinctions, and increased occurrences of extreme weather events (droughts, floods, cyclones, and wildfires). While sporadic environmental movements occasionally form in Canada to demand tangible political action – such as Idle No More, David Suzuki's Blue Dot Movement, and anti-pipeline protests - the vast majority of Canadians remain silent and, in doing so (knowingly or not), provide tacit approval for ‘business as usual’.

Public inaction toward the threat of AGW is cause for concern. According to an international Pew poll conducted in spring 2015, countries with high per capita CO<sub>2</sub>

emissions have populations that are less concerned about AGW than those with low per capita emissions (Stokes, Wike, & Carle, 2015): Canada was referred to specifically in this report as one such country. The same study revealed that only half of Canadians (51%) consider AGW ‘very serious’, 33% consider it ‘somewhat serious’, 10% ‘not too serious’, and 5% ‘do not consider it to be a problem’ (Stokes et al., 2015). The finding that 84% consider it to be at least ‘somewhat serious’ is promising; however, this response seems disproportionate considering the severe threats posed by AGW.

Public knowledge concerning the existence of AGW is more reassuring. Lachapelle et al. (2014) asked Canadians if “there is solid evidence that the average temperature on earth has been getting warmer over the past four decades”: 85% said ‘yes’, and 12% said ‘no’. Beliefs across the provinces were mostly consistent with these numbers, despite the notable exceptions of Manitoba and Saskatchewan (both 65% ‘yes’) and Alberta (71% ‘yes’) (Lachapelle et al., 2014, p. 3). Those who answered in the affirmative were asked whether the earth was warming “because of human activity such as burning fossil fuels” or because of “natural patterns in the earth’s environment”: 58% attributed it to primarily human factors; 15% to primarily natural factors; 23% to a combination of the two; and 4% were not sure (Lachapelle et al., 2014, p. 6).

A clear gap exists between climate scientists and segments of the Canadian public regarding causes and threats of AGW. This disconnect, minimal government action, and limited public action to hold politicians and corporations accountable necessitate exploration and a deeper understanding of causes. These circumstances manifest within the specific historical context of a country highly reliant on exporting fossil fuels. The

influence of political-economic conditions on discourse and public perception is axiomatic and must be considered.

**1.1.2 Politico-economic conditions in Canada.** Much of the country's economy has historically been resource driven (Innis, 1979, Mackintosh, 1979; Young & Coutinho, 2013). Noting the exception of a significant increase in industrial manufacturing from 1960-2000 (Canadian Center for Policy Alternatives, 2013), Canada has, from its earliest days, relied heavily on the export of its natural resources, often referred to in the political economy literature as 'staples' (Innis, 1979; Mackintosh, 1979). The staples theory of political economy outlines the relationship between Canada and its trading partners (primarily the U.S.) and has been challenged and revised multiple times (Panitch, 1981; Schmidt, 1981; Watkins, 1963), but nonetheless remains useful for delineating the role of natural resources in Canada's economy. Applying staples theory, Fast (2014) examines the extraction and manufacturing sectors in Canada and notes that both have seen declines in their respective percentages of the GDP from 1998-2011, but, despite this, the extractive sector remains a key driver of the Canadian economy.<sup>1</sup>

Foreign influence is also an important factor in the political economy of natural resources. Investments of foreign capital, along with investor-friendly contracts between corporations, provinces, and countries that follow, grant varying degrees of influence on policies at all levels of government. The degree of foreign ownership over natural energy resources in Canada is significant; in 2010, 35% of assets and 50.6% of revenues in the

---

<sup>1</sup> Fast (2014, p. 38) argues that the importance of raw and near-raw natural resources exports – to the Canadian economy as a whole - is its role in reducing trade deficits.

oil and gas extraction sector (including supporting activities) were under the control of foreign capital (Fast, 2014).

Canada has disproportionately high carbon emissions per capita compared to other OECD countries (Conference Board of Canada, 2011). In 2013, Canada's per capita CO<sub>2</sub> emissions were significantly higher than Norway, Japan, Germany, China, UK, Denmark, and Sweden (World Bank, 2017). Despite continued declarations that AGW is being taken seriously by every federal party in leadership from 1988 to the present, and the ratification of multiple international treaties aimed to mitigate AGW, the country's emissions have, for the most part, continued to rise.<sup>2</sup>

Canadian climate politics is characterized by disingenuous promises to reduce greenhouse gas (GHG) emissions. Every Prime Minister from Brian Mulroney (1984-1993) to Stephen Harper (2006-2015) has, at some point during their tenure, assured the public that AGW is of primary concern and that it will be addressed; however, any action to do so has been immediately undermined by increased development of natural resource extraction and energy production. Historically, instead of enacting policies to reduce absolute levels of GHG emissions, governments have relied on increased funding for technology to reduce, or capture, GHG emitted from burning fossil fuels, voluntarist programs to encourage corporations and individuals to reduce their carbon footprint, and (some) spending on 'greening' infrastructure (e.g., increasing energy efficiency of public transportation) (Doern et al., 2015; Simpson et al., 2007).

---

<sup>2</sup> The only exception to this came in the wake of the 2008 financial crisis. GHG emissions dropped from 2008-2011 but have been rising steadily since that time.

Government inaction has been discussed thoroughly in the literature. In a meta-analysis, Macdonald (2008) groups the reasons for government inaction into four broad categories: the magnitude of the challenge; political opposition; regionalism and federalism; and inadequacies within the federal government administrative structure. The magnitude of the challenge refers to the physical and technical obstacles to reducing emissions. These include population and economic growth from 1980 to the present (Simpson et al., 2007) and Canada's geographic characteristics – its vastness and temperature extremes; and the significant role of energy in the current economic system (Samson, 2001). Considering these challenges, Harrison and Sundstrom (2007) argue that Canada is at a significant disadvantage in reducing emissions compared to other Kyoto signatories (primarily European countries) whose socio-economic and socio-historical circumstances are more favorable for addressing this challenge. These arguments have all been expressed by the Harper government in support of their reluctance to reduce emissions.

Political opposition from powerful stakeholders in industry and some provincial governments (especially Alberta) forestalls federal attempts to reduce emissions (Nikiforuk, 2010; Taft, 2017). Canada's largest energy corporations - Canadian Natural Resources Limited, Embridge, Imperial Oil, Suncor, Trans-Canada, and others - have allocated significant resources lobbying government, influencing post-secondary institutions, and promoting their message. This occurs primarily through funding CTTs and collective organizations such as the Canadian Association of Petroleum Producers and the Energy Policy Institute of Canada (Gutstein, 2018; Hogan & Littlemore, 2009; Macdonald, 2008; Nikiforuk, 2010; Simpson et al., 2007; Taft, 2017). Provinces -

primarily Alberta, but also Saskatchewan, and Newfoundland - whose economies rely heavily on the fossil fuel sector have played a leading role in obstructing federal attempts to reduce emissions (Macdonald, 2008; Smith, 1998). The increased oil sands development in Alberta over the last twenty years has brought billions of dollars into its economy (Nikiforuk, 2010). Rather than stabilizing growth, or reducing it, the province has held firmly to its conviction of increased fossil fuel extraction (Davidson & Gismondi, 2011; Taft, 2017) and has acted in accordance with this goal - seeking increased financing of oil sands, and the construction of, or addition to, pipelines and so on.

Canada's physical size, geography, and cultural diversity generate a form of regionalism that entails a wide range of values and interests, often starkly opposed. This produces difficulties for the political system of federalism in place. Federalism sees provinces with their differing interests maintaining primary jurisdiction over energy and resource laws (Doern et al., 2015). The prairie provinces strongly rely on the extraction of natural resources, while the economies of Ontario and Quebec are primarily structured around manufacturing. Eastern provinces have higher populations than the west and more energy users. The energy they consume is largely provided by low carbon technologies such as hydro and nuclear, as opposed to Alberta and Saskatchewan who rely heavily on coal (Macdonald, 2008). These differences among regions and provinces complicate the difficulties of writing and enacting policy at the federal level and further explain Alberta's historical position on the issue of climate policy compared to its eastern counterparts.

Inadequacies within the federal government's administrative structure sees conflicts between federal departments emanating from competing goals that remain unaddressed due to poor leadership. Simpson et al. (2007) contend that, from its commencement, Environment Canada has been looked upon by other departments with suspicion and derision as a "job-killing engine" (p. 43) Simpson et al. (2007) further argue that Jean Chretien's hands-off management style further aggravated tensions between departments – especially Environment and Natural Resources - rather than pragmatically addressing them.

Macdonald (2008) agrees that the literature discussing these four categories (listed above and outlined in his meta-analysis) correctly points to significant obstacles but insists they can be overcome. He contends that the failure to enact policies for mitigating AGW is ultimately due to a lack of will on the part of those seeking to do so, relative to the will of those opposing action. More specifically, federal leadership on AGW, provincial support of the federal government, and environmental pressure from the public have all been lacking. Neither of the two federal parties leading the country during the evolving threat of AGW have an inherent drive rooted in their party ideology to address the problem. Both the Liberal Party (centrist orientation) and the Conservative Party (right-wing orientation) are primarily focused on economic growth. Their proclamations to mitigate AGW, and any actions they have taken, result from international and public pressures (Doern et al., 2015; Macdonald, 2008; Simpson et al., 2007). Finally, Macdonald (2008) posits that there are structural disparities between energy corporations and environmentalists regarding political influence. First, Canada's Westminster-style electoral system hampers the role of marginal parties; and second,

corporations maintain unequal access to policy makers compared to environmentalists. The minimal actions taken by government thus far has assuaged public concern enough to undermine broad and strong support for environmentalist positions (Macdonald, 2008). The political-economic conditions outlined here provide the necessary background for later exploration into conditions that may influence the specific manifestation of AR in Canadian news-discourse.

### **1.2 Purpose Statement and Research Questions**

The purpose of this thesis is to determine the extent to which anti-reflexivity is present in Canadian news-media, and to consider how Canadian conditions shape its discursive form. More specifically, this research seeks to delineate the strategies of anti-reflexivity that are used to influence public opinion and identify the prominent individuals and institutions who publicly express them in the Canadian context. To reiterate in the discourse of CR: this thesis considers the role of the AR causal mechanism in producing AR discourse in Canadian news-media, reflects on this mechanism's internal and necessary relations, and examines the external conditions influencing its idiosyncratic form in this context.

### **1.3 Axiological Considerations**

This thesis maintains a critical posture toward constructed forms of knowledge destined for public consumption. Following Gorski (2013): "If one can demonstrate a systematic connection between inaccurate beliefs and oppressive social structures, then one has not only explained the beliefs but also supplied a motivation for changing the structures. One has just made the leap from facts to values" (p. 667). Standing upon the shoulders of prominent scholars such as Pierre Bourdieu, Michel Foucault, William Freudenburg,

Roy Bhaskar, Norman Fairclough, and others, the research here seeks to shine a light on the enormous influence of discourse over individual and social perceptions of reality.

There can be no doubt that this admission of value-laden research will pre-emptively undermine the value of its insights in some quarters. However, CR rejects the feasibility of value-neutral research and instead champions epistemic relativism, judgemental rationality, and cautious ethical naturalism (Danermark, Ekstrom, Jakobsen & Karlsson, 2002). That is, it supports the view that knowledge is context-, content-, and activity-dependent; some accounts of reality are better than others; criteria are available for making this determination; and realism entails a cautious normative element whereby informed research may be able to speak to pre-established norms and values (Archer et. al., 2016).

#### **1.4 Rationale and Significance**

This research is part of a larger endeavour to assess the various mechanisms constituting public perceptions of AGW. It is well-established that AGW poses a multiplicity of threats to all life on our planet, including the possibility of human extinction. Despite this, Canada's political leaders either engage in empty rhetoric of sustainability that is devoid of any practical follow-up, attempt to ignore the problem and deflect difficult questions, or simply deny the existence of AGW. In all instances, Canadian policy-makers continue to enact energy policies that exacerbate the problem. Although Canadians express some concern about AGW, the issue only becomes widespread and prominent during key events, such as the release of Al Gore's documentary, *An Inconvenient Truth*, and the United Nations Summits where significant international policy announcements are expected. Because Canadian politicians pay attention to AGW

when public concern is high, and most progress in policy occurs during these periods (MacDonald, 2008), it is important to develop a deep and nuanced understanding of how individuals and groups think about AGW and, more specifically, what factors influence, or manipulate, their positions.

### **1.5 Organization of Thesis**

The socio-historical, political, and economic conditions in Canada, briefly outlined here, provide an interesting case study for exploring AGW discourse in the public sphere. This thesis draws on a wide range of theories and isolated concepts to elucidate and unpack empirical (i.e., surface level) discourse and narratives of AGW. These theoretical frameworks are presented in a review of the literature, following this chapter, along with previous research on AGW discourse in Canada. The third chapter – methodology and methods – opens with a discussion of the critical realist meta-theory that guides this study and proceeds to outline the methods of data collection and content analysis used here. Chapter Four presents the findings and results of these methods. This includes both extensive (quantitative) and intensive (qualitative) results along with additional information gathered on specific individuals and institutions of interest. The fifth chapter considers the results using the theoretical frameworks of understanding discussed in the literature review, the Canadian context outlined above, and previous research in the area. The final chapter summarizes the thesis, contextualize the results and discussion within the larger project of understanding public inaction toward AGW, and poses potential areas of future research.

## Chapter 2: Literature Review

In describing anthropogenic global warming (AGW) in the news-media, Gelbspan (as cited in Good, 2008, p.234) contends that “ultimately, the urgency and magnitude of this issue should keep this story at the top of news budgets. It pits the future of our highly complex and vulnerable civilization against the profit and survival of an [oil] industry that generates more than one trillion dollars a year in commerce worldwide.”

Unfortunately, this story is not at the top of news budgets, nor has it ever been. This is distressing considering the role of news-media in society; meaning - and all behaviour, which is inherently based on it - is socially constructed through communication (Castells, 2009). Widely distributed news-media both reflects public interest (Zhao, 2009) and influences it (Brulle, Carmichael, & Jenkins, 2012; McCombs, 2004).

Powerful actors benefitting from petroleum exploitation (and its continued expansion), and those opposing it, recognize this reality (Katz-Rosene, 2016). Scholarly analysis of news-media dates to (at least) 1948 (Krippendorf, 2004); environmental concerns in news-media to the 1970s (Comfort & Park, 2018); and coverage of AGW specifically to the early 1990’s (Schafer & Schlichting, 2014). These interconnected areas are discussed here in turn, along with those theoretical frameworks and concepts deemed pertinent for later theoretical re-descriptions of empirical results.

### 2.1 Role of the Media

Lewis (2012) provides a useful distinction for dividing the sociology of journalism literature into two distinct, interconnected subfields: journalism’s construction of reality in society, and journalists’ self-depiction of their role in society. This thesis focuses on the former but recognizes the importance of the latter and briefly addresses it below. The

news-media's role in reflecting and influencing public perception is well established (Boykoff, 2011; Brulle et al., 2012; Norgaard, 2009, Stoddart, Anttila & Tindall, 2017). The "mass media", which includes newspapers, influences public perception of AGW and helps to raise awareness and concern of risks (Carvalho, 2010). Leiserowitz (2006) found that individuals who read newspapers tend to perceive AGW as a greater risk and Brulle et al. (2012) revealed media coverage to be a key driver of public perception of AGW. The agenda setting theory seeks to delineate the process of this influence; it posits that news-media has the power to influence the salience or prominence of a given phenomenon in the public by directing attention toward, or away, from it (Mccombs, 2004). The concept of 'framing' is particularly important in this subject area. Goffman (1974, p. 21) defines frames as "schemata of interpretation" that are used to "locate, perceive, identify, and label" phenomena or events. According to Entman (1993, p. 52), framing involves increasing the salience (i.e., notability, meaningfulness, and memorability) of a specific element of reality during communication to "promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item described." Benford and Snow (2000) build on this by coupling framing and agency within the study of social movements and collective action frames. They contend that actors construct reality (Trumbo, 1996), or frame it, through specific claims on relevant issues (Gamson & Modigliani, 1989). These claims cue audiences to perceive issues through a preferred lens (Brulle et al., 2012). McCright, Charters, Dentzman, and Dietz (2015) tested the effectiveness of framing and found that exposure to frames denying AGW significantly reduces beliefs in the existence of AGW,

acceptance of the climate science, and understandings of possible risks associated with AGW and support for aggressive efforts to reduce greenhouse gas (GHG) emissions.

Traditionally, news-media institutions have held the responsibility of collecting, filtering, and distributing news information to the mass public (Lewis, 2012). Hartley (as cited in Lewis, 2012, p. 838) opines that journalism, as an institution, seeks to present itself as the “primary senses maker...of modernity.”<sup>3</sup> Dispensa and Brulle (2003) caution that ‘the news’, as reported, is a “highly selective account of events” made by specific individuals working within an institutionalized set of boundaries (p.81). This ‘boundary setting’ is accomplished initially through a ‘consensual occupational ideology’ – “the values, strategies, and formal codes that characterize journalism” (Lewis, 2012, p.845). These include established institutional routines and organization-spanning norms that (in the U.S. and Canada, at least) are rooted in “objectivity as a way of laying claim to social authority” - allowing them “to present their work as value-free and ‘credible’, ‘balanced’, and ‘true’” (Lewis, 2012, p.843). This ideology is conditioned by other social factors, such as the political leaning of a journalist’s news organization and the individual sources they rely on, which influence the selection and depiction of news covering AGW. Values and formal codes of journalism often clash with the increasingly powerful profit motive of news conglomerates. For instance, the topic of AGW and the solutions required to address it may hinder the ability of news conglomerates to attract corporate advertisers threatened by it (Dispensa & Brulle, 2003, p.75). Historically

---

<sup>3</sup> The statement refers to journalism’s difficulties in adjusting to the new digital era of internet; hence the use of past tense.

useful boundary setting devices such ‘objectivity’ and ‘balance’ have also become problematic, especially regarding the topic of AGW. Boykoff and Boykoff’s (2004) study illustrates how balanced reporting leads to bias when journalists tell “both sides” of the AGW story (i.e., those of climate change scientists and climate change deniers), despite an overwhelming consensus favouring climate science over climate science deniers. Journalists simultaneously deal with the interrelated effects of increased corporate control, through corporate mergers, often leading to budget cuts that decrease the number of staff and resources and increase the workload of those who remain (Dispensa & Brulle, 2003). This has undermined the ability to accurately convey the complexity and nuances of AGW (Boykoff, 2011; Boykoff & Yulsman, 2013).

Today the boundaries between traditional journalism and new forms of amateur online journalism are blurred (Lewis, 2012). The role of journalism in disseminating news-information is being challenged by bloggers, user-generated content (such as YouTube videos), and satirical news anchors (Lewis, 2012). The steady decline of newspaper-prints generally, and of their hegemonic position as “purveyors of news,” has become the new normal. Despite this, Stoddart et al. (2016) contend that newspapers “remain important spaces for engagement among policymakers and activists, and ... *a source of information for other media including online news feeds and social networks*” (emphasis added). Ford and King’s (2015) study of four influential North American newspapers found evidence supporting the latter assertion and Lester and Hutchins (2012) contend that, rather than abandoning traditional media, we should recognize that “communicative bridges” are being constructed between these and new forms of online media, such as YouTube, Twitter and Facebook.

## 2.2 Media Coverage of AGW

Research on media coverage of AGW began in the 1990s but remained relatively stagnant until the mid 2000s (Schafer & Schlichting, 2014). Scholarship on the subject has grown considerably from 2008 onwards; 80 peer reviewed articles were published from 2008-2011 (Schafer & Schlichting, 2014).<sup>4</sup> Comfort and Park's (2018) recent review of the field of environmental communication determines that five of the ten most cited articles address issues pertaining to journalism.

There are a small number of key findings and tendencies worth pointing out. First, news-media coverage of AGW was minimal up until 1988 (Mazur & Lee, 1993). Second, coverage of AGW has risen overall since this time, but tends to cycle through intensive peaks and declines, usually connected to major events such as IPCC reports and United Nations Summits (Boykoff & Yulsman, 2013; Carvalho, 2007; Grundmann & Scott, 2014; Trumbo, 1996). Third, scientists were originally the preferred sources of news-media coverage of AGW but were quickly replaced by economists and political specialists (Carvalho, 2007; McCright & Dunlap, 2000; Stoddart & Smith, 2016; Trumbo, 1996; Wilson, 2000). Fourth, coverage of AGW varies between countries and regions both qualitatively (i.e., the type of coverage) and quantitatively (i.e., the amount of coverage) (Antilla, 2010; Broadbent et al., 2016; Grundmann, 2007; Grundmann & Scott, 2014). Fifth, coverage of AGW is significantly influenced by journalistic norms (Boykoff & Boykoff, 2004, 2007) and ideological standpoints (Carvalho, 2007). Sixth,

---

<sup>4</sup> To put this into perspective, 133 peer reviewed articles were published between 1991 and 2012 (Schafer & Schlichting, 2014)

media coverage constructs individual subjectivity and can therefore influence the perceived validity and utility of individual participation in the political arena (Carvalho, 2010).

Studies of news-media coverage of AGW (newsprint, radio, and television) within countries are limited. These include (but are not limited to): Australia (McManus, 2000), Sweden (Djerf-Pierre, 2011), Japan (Sampei & Aoyagi-Usui, 2009), Peru (Takahashi & Meisner, 2012), U.K. (Antilla, 2005, 2010; Boykoff, 2008; Carvalho, 2005, 2007; Grundmann & Scott, 2014 ), and the U.S. (e.g. Antilla, 2005, 2010; Boykoff & Boykoff, 2004, 2007; Elsasser & Dunlap, 2013; McComas & Shanahan, 1999). Comparative international studies are more common and include Finland (Dispensa & Brulle, 2003), France (Grundmann & Scott, 2014 ), Germany (Grundmann, 2007; Grundmann & Scott, 2014), New Zealand (Dispensa & Brulle, 2003), Spain (Bailey, Giangola & Boykoff, 2014), U.K. (Antilla, 2005, 2010; Boykoff, 2008; Carvalho, 2005, 2007; Grundmann & Scott, 2014 ) and the U.S. (Dispensa & Brulle, 2003, Grundman, 2007, Grundmann & Scott, 2014). The project: *Comparing Climate Change Policy Networks (COMPON)* likely provides the most substantial comparison of nations to date. The ongoing effort has brought together teams of researchers from 16 different nations (and Taiwan) to compare newspaper coverage of AGW. Nations with positive coverage of IPCC science are more likely to reduce emissions, consider climate politics and ecological risks on a global scale, and support mitigation policies (Broadbent et. al., 2016); while those with more debate on climate science and mitigation policies in their papers are more likely to have increased emissions compared with a 1990 baseline.

### 2.3 Media Coverage of AGW in Canada

Scholarship on AGW discourse in Canadian newsprint is still in its infancy. A review of the literature reveals only a handful of peer reviewed studies published in journals and no books devoted to the subject specifically.<sup>5</sup> This lack of analysis is particularly troubling in a country that contains the third largest oil reserves in the world – 173 billion barrels total with 167 billion barrels currently accessible in the tar sands (Canadian Association of Petroleum Producers, 2014). Despite this, work conducted – mainly by sociologists and communication specialists - on the Canadian context is punctiliously linked to existing research conducted elsewhere and provides a firm basis for further study of the Canadian context.

Newsprint coverage of AGW in Canada has grown over time (Ahchong & Dodds, 2012; Stoddart et al., 2016; Young & Dugas, 2011). Good (2008) finds that major Canadian newspapers discuss AGW more than major U.S. and International papers, suggesting the issue may be more salient in Canada. During 2007, Canada's newspapers had three times more coverage of AGW than those in the U.S. Although the issue may be more salient in Canada, coverage follows the same cyclical patterns of peaks and troughs found in all English-speaking countries discussed in the literature (Ahchong & Dodds, 2012; Stoddart et al., 2016; Young & Dugas, 2011).

Despite increased coverage over time, the breadth and depth of stories has narrowed. In their longitudinal study of the Globe and Mail (G&M) and the National Post (NP) -

---

<sup>5</sup> One notable exception may be Davidson and Gisomondi's (2011) *Challenging Legitimacy at the Precipice of Energy Calamity*. This book analyses all discourse related to the Athabasca tar sands, including that of news-media.

1988/1989, 1998/1999, 2007/2008 – Young and Dugas (2011) find that Canadian news-media play an active role in the ‘decontextualization’ of AGW, whereby context and nuance are substituted with a narrow focus on the business and politics of climate change.<sup>6</sup> This leads them to surmise that AGW has become a means for discussing other issues such as politics and economics. They further speculate that the mechanisms constituting this transition are numerous and include a minimal understanding of climate change among journalists, the structural qualities of the media (e.g., its narrative format, how it is event-based), and the role of special interests.

Stoddart et al. (2016) find a similar trend and argue that the topic of AGW has likely become part of the normal news cycle, and therefore subject to the peaks and troughs discussed prior. Peaks largely coincide with “key national and international turning points in policymaking and scientific knowledge production, rather than by ecological or meteorological events,” such as the adoption and ratification of the Kyoto Protocol and the release of Al Gore’s film “An Inconvenient Truth” (Stoddart et al., 2016, p. 224). Through a more specific analysis of the dominant thematic frames over the period of 2007/2008, they find that almost half of the frames are ‘policymaking’, and 15%-20% concern ‘economic and energy interests’. The remaining frames – ‘ecology/meteorological’, ‘culture’, and ‘civil society’ – are used sparingly.

They also capture and tally issue categories or specific topics discussed within the broader thematic frames. The top-ten categories primarily consist of responsibility (e.g., government, corporate, media, citizen) and solutions. ‘Government responsibility’, ranks

---

<sup>6</sup> The National Post only began publishing in 1998, so was not included in the first time-period.

first in the list and accounts for nearly 20%. This is unsurprising considering the predominance of ‘policymaking’ frames. ‘Ecological, meteorological impacts of climate change’ (9.35% of the articles) and ‘reliability of climate change science (8.89% of the articles) rank 2 and 3. Social justice and social justice implications are marginal. Coverage of the ‘reliability of climate change science’ is found primarily in the NP and, for the most part, is separate from articles framed in policymaking. This finding coincides with that of Young and Dugas (2011) who determine that the NP has significantly more AGW coverage than the G&M; however, this coverage often questions the reliability of the science.

Stoddart et al. (2016) find that two-thirds of articles discussing ‘ways to mitigate’ were depicted through economic energy, and science and technology frames. This likely alludes to the technocratic rationality inherent in many approaches addressing AGW that tends to bracket the issue within a narrow focus and ignore the underlying social and cultural factors. Good (2008) comes to a similar conclusion from a different angle. She determines that those AGW frames with the potential to threaten fossil fuel interests (e.g., reduction of oil, covering linkages between AGW and weather events and so on) are extremely rare in Canada (as well as the U.S and major international newspapers).

Aligning with the global trend, the role of scientists as sources has declined significantly in Canada (Stoddart et al. 2016; Young & Dugas, 2011). Young and Dugas (2011) find that scientific perspectives have been replaced by business angles such as ‘green capitalism.’ Unlike the U.S., however, Canadian news does not attempt to ‘balance’ consensus and skeptic voices (Boykoff & Boykoff, 2004; Young & Dugas, 2011).

Murphy (2015) examines climate change discourse and determines that Canadian news tends to frame the extraction of fossil fuels and the emission of GHG as ‘non-problems’. His research looks at a wide range of media outlets that include the G&M and the NP. His deconstruction of texts regarding the Alberta bitumen sands leads him to surmise that language is manipulated to re-frame key issues. This manipulation diverts public attention away from pollution by re-focusing it on geopolitics (e.g., re-branding of Canadian petroleum as ‘ethical oil’). He also finds that oil companies are favoured in news coverage and important findings from established scientists and organizations are often neglected. News outlets appear hesitant to criticize government inaction; for example, the Federal Government’s decision to renege on its Kyoto Protocol commitments receives limited criticism. Finally, there is a failure to address global injustices related to unequal levels of emissions and risk. He concludes that the Canadian media play a key role in legitimizing the country’s high per capita emissions (Murphy, 2015).

Young’s (2011) analysis of ‘letters to the editor’ finds that these sections are far more likely to contain scepticism than other sections. Discourse analysis of specific letters reveals anti-elitism and anti-intellectualism, populist interpretations of political economy, and fatalistic positions on mitigation. He argues that these letters are instrumental in introducing fringe, or unprovable ideas. Ideas that, to some extent, are legitimized through print.

Finally, it should be noted that Canada’s size, cultural diversity, and historical regionalism produces significant differences in discourse across cultures and locations. Young and Dugas (2012) highlight one important difference in their comparative study

of English and French newspapers. They reveal that newspapers in both languages take a substantial interest in AGW, discuss important scientific discoveries, and avoid the “conflict among experts” discourse popular in the U.S. French papers, however, cover significantly more ecological issues and provide a greater diversity of themes. English papers focus more on economic risks resulting from mitigation and have a greater diversity of voices. French papers tend to humanize expert knowledge claims by identifying victims – human beings, animals, landscapes and so on, while English papers present narratives that are more self-referential and contained. These differences between English and French papers are not accounted for in this study, but nonetheless highlight the diversity of Canadian culture and news-media.

#### **2.4 The Role of Counter-Movements in Canada**

While news-media seek to convey the news and, thus, social reality, think tanks aspire to produce specific understandings of reality that are designed to influence public perception and policymaking. These institutions are typically non-profit, independent, and staffed by academics tasked with conducting studies to examine (and sometimes explicitly support) their assertions. Conservative think tanks (CTTS) advocate for “core conservative ideas” (Neubauer, 2011, p. 68), focusing on neoliberalist tenets such as “free enterprise” and “limited government” (Jacques et al., 2008, p. 355). The role of counter-movements, and CCT’s specifically, in influencing AGW discourse in Canada has received limited attention (See Greenberg, Knight, Westersund, 2011; Gunster, 2011; Gutstein, 2018). Young and Dugas (2012) apply the anti-reflexive (AR) thesis (discussed below) to the political messaging conducted by Prime Minister Stephen Harper’s conservatives, but the study does not include an analysis of news-media. Greenberg et al.

(2011) delineate the public relations debate over AGW framing between Canadian corporations and non-government organizations. Their work uncovers the positions and strategies of these groups but does not include how they are framed in the news.

Davidson and Gismondi (2011) discuss the actors and discourse promoting Alberta oilsands production, but do not address the role of CTTs or the AR thesis. The lack of AR research in the Canadian context is not unique or surprising. The AR thesis has been developed only recently and research on the role of CCT's has been focused on the U.S. (Dunlap & Jacques, 2013; Hoggan & Littlemore, 2009; McCright & Dunlap, 2000, 2010; McCright, Xiao, Dunlap, 2014; Oreskes & Conway, 2010). This study seeks to address this gap.

## **2.5 Sociological Theory**

**2.5.1 Reflexive modernization: Socio-historical conditions.** Beck's theory of reflexive modernization provides a framework for situating the discourse of climate change within the current socio-historical and spatial context. More specifically, his approach reveals key insights into diminishing public trust in scientific expertise. He argues that Western society is entering a radicalized version of modernity that is fundamentally characterized by dynamic contestations over meaning itself. This is due to the inevitable self-confrontation of industrial society with the risks it creates and the breakdown of modernity's foundational social mechanisms – sovereign nation states, gainful (and relatively secure) employment, the nuclear family, and so on – that previously provided frameworks of meaning and identity. According to Beck (1994), the transition from 'industrial society' to 'risk society' entails the recognition of industrial society's inability to deal with the side-effects it creates. This dynamic is captured in the

concept of ‘reflexivity’. The breakdown of those mechanisms which previously structured social organization, and thus guided decisions across both micro and macro levels, represents the subsequent manifestation of this transition. Further, their continuing disintegration undermines the entire system and creates openings for new social constructs and meanings.

Part of this reflexivity (especially that of knowledge production) follows largely from the pragmatic ‘reflection’ inherent in “impact science.” Impact science “identifies environmental and public health impacts of economic production” (McCright, Dentzman, Charters, & Dietz, 2013, p. 1). This is distinguished from “production science,” which is utilized for increasing economic production. It came to the fore in the 1960s and 1970s when the widely held ideal of continuous human progress driven by productive science, technology, and the continual exploitation of the natural environment (i.e., the dominant social paradigm), was recognized as problematic considering the indisputable degradation of the environment on a global scale (Schnaiberg, Pellow, Weinberg, 2003).<sup>7</sup> Heightened public concern over the effects of industrial production on the environment and human beings, though hardly new, increased in scope and scale to unprecedented levels throughout the 1970s and 1980s (Dunlap, 1997). New forms of ecological discourse captured the attention of scholars and the public, while, at the same time, public trust in science as an apolitical institution began to decline. However, this

---

<sup>7</sup> McCright and Dunlap (2010) argue that “various strands of environmental science have moved from the frontier to the core scientific standing, producing knowledge used by environmental policy-makers, organizations and activists.” (p. 104). Rachel Carson’s trailblazing work *Silent Spring*, published in 1962, was one of the first to do so.

decline occurred for vastly different reasons across political and social groups (Gauchat, 2012).

Conservative distrust of science is tied directly to the threat that reflexivity represents to its value system. Reflexivity, and the subsequent development of impact science, undermines the legitimacy of the deeply rooted Western worldview of progress (and more specifically the dominant social paradigm) and its benefits. The belief in continuous progress has become intertwined with continuous growth (Nisbet, 1980), which is an internal and necessary mechanism constituting capitalism (Harvey 2014). The subject matter, processes, and goals of impact science exist in opposition to the fundamental property of the dominant economic system of capitalism. This is a broad simplification, but suitable for contextualization here.

Diminished trust in science within academia has occurred, as well. Beck, Bonns, and Lau (2003, p.16) refer to this as “questioning the cognitive basis of first modernity.” This consists of a reflexive stance on the underlying, presupposed and (typically) unquestioned notions that have traditionally guided research and the development of knowledge – a “reflection on reflection.” Ironically, impact science provides a wealth of empirical evidence which exposes the shortcomings of previously held presuppositions of science. Postmodernists – arguably those academics most critical of the largely unquestioned notions of any form of ‘superior’ rationality – maintain a critical stance towards the idea of modern exceptionalism. With the modern idea of progress built on the role of scientific rationality, a rejection of the idea of progress presupposes the diminished role of science as the vanguard of Western society. This is apparent in the postmodernist critique of objectivity in scientific practice (Lyotard, 1979). Perhaps most

devastating for the legitimacy of production science is its historical role in the development of new catastrophic forms of risk.<sup>8</sup>

Beck (1992) argues that success, as opposed to failures, of modernity's constituent mechanisms - nation state societies, bounded individualization, access to gainful employment, nature as an object of exploitation, and continuous progress driven by technological rationality - has led to side-effects that undermine them and the framework of modernity. Many of these side-effects, labelled 'risks' up until the point they manifest, have no historical precedent, possess the ability to supersede time and space, and, most importantly, cannot be adequately addressed by the mechanisms of modernity that gave rise to them.

Pertinent here is AGW which can be traced back to the technological rationality that gave rise to capitalism and the industrial revolution. Technological rationality, capitalism, and the industrial revolution have given societies the power to manipulate the environment in new and extraordinary ways, presupposing a transcendence beyond many limitations faced by pre-modern societies. However, through the process of environmental manipulation, modern society has, among other things, disrupted the planet's natural cycles of warming and cooling. This has subsequently instigated new risks such as the increased frequency and intensity of superstorms, sea level rise, and disruptions of rain cycles that affect farming practices.

---

<sup>8</sup> The extent to which postmodernism effects the social, cultural, political and economic domains of society is beyond the scope of this paper. Its inclusion here is meant primarily to illustrate the manifestation of reflexive modernization.

Reflexivity necessarily includes critiques of those risks brought by modern social structures. Proponents of the reflexive modernization thesis see reflexivity as a necessary step to deal with these risks in order to move into a more sustainable future (Beck, 1992). Beck contends that a new ‘cosmopolitan society’ will arise whereby the old structures of power and control are revised by the efforts of a pluralistic movement of individuals from the ‘bottom-up’. However, the same social spaces opening for a cosmopolitan revolution may be exploited by individuals and institutions seeking to forestall it. Further, the hegemonic position science once held in elucidating the concrete structures has waned, leading to new spaces for alternative discourse to challenge it.

**2.5.2 Anti-reflexivity: Resisting change.** Building on Beck’s theory of reflexive modernization, while challenging many of its conclusions (e.g., the cosmopolitan revolution), McCright and Dunlap developed the anti-reflexivity thesis. Their approach contends that a skeptic counter-movement began forming in the early 1990s (McCright & Dunlap, 2000) in response to the growing concern over AGW. This counter movement, referred to from here as AR forces, seek to maintain the existing social-political-economic order by preventing or stalling reflexively oriented practices that threaten their interests. Knight and Greenberg (2011) describe this movement as “part of a broader ‘new right’ movement” consisting of an “uneasy alliance of socially moral conservatism and economic neo-liberalism” (p. 326). It includes a coalition of industry associations, corporate funded foundations, think tanks, sympathetic politicians and intellectuals, media outlets, and “elite-funded front groups composed of interested citizens” (Knight & Greenberg, 2011, p. 326). These groups aim to exploit the newly created social spaces in knowledge production to promote an alternative discourse to that

of impact science. This is primarily coordinated and accomplished through the work of CTTs (Dunlap, 2014; Dunlap & Jacques, 2013; McCright & Dunlap, 2010, 2011a, 2011b; McCright et al., 2015). Prior to the AR thesis, controversy surrounding AGW in the U.S. was largely considered the result of a failure in communication by scientists, journalists or both (Ungar, 1998), or the difficulty of relaying the dynamic complexity of AGW within pre-existing journalistic practices (e.g., the issue-attention cycle) (Downs, 1972). McCright and Dunlap (2000) acknowledge the failure in communication but assert that this is largely due to the actions of claims-makers who oppose environmental discourse and practices.

The AR forces studied within this theoretical framework have thus far been based in the US and focused on American citizens. These are politically conservative think tanks, such as the Heritage Foundation, who work with, and are largely funded by, energy companies (Farrell, 2015).<sup>9</sup> They foster environmental skepticism through various media outlets and practices to resist impact science threatening free market profit-making in the energy sector (Jacques et al., 2008). It is important to note that their position is definitively ideological and often focused on financial gain. Their primary claims are not supported empirically, tend to directly oppose the views held by the vast majority of scientists (Lahsen, 2005), and following Fairclough (cited in Jorgensen & Phillips, 2002, p. 14), distort “meaning in the service of power.”

---

<sup>9</sup> Young and Coutinho (2013) have extended this group to include conservative politicians who act in a similar manner. Their insight is important and should be explored further, however, for brevity, the specifics of this subject will only be covered in this study as they relate to news media coverage.

In other words, these discursive practices serve to increase the wealth and power of the powerful. Strong, institutionalized resistance to environmental protection began shortly after the rise of impact science. Initially, resistance groups within President Reagan's administration directly opposed the Environmental Protection Agency's regulations in Congress during the 1980s (Dunlap & McCright, 2015; McCright et al., 2013). This strategy failed, and the explicit contempt for the environment brought the intentions of those resistance groups into question (Gauchat, 2012). In response to this failure, CTTs became the key coordinators of this resistance. They established networks and launched a "full scale countermovement" (Jacques et al., 2008, p. 351). The new approach attacked the ideas of impact science directly using the newly formed strategy of environmental skepticism (Jacques et al., 2008).

Environmental skepticism aims to dispute the basis of environmental protection by undermining the science along with the scientists themselves (Dunlap & McCright, 2015). It consists of four key strategies: manufacturing uncertainty; emphasising the need to prioritize other problems (social, economic) over environmental ones; promoting anti-regulation and anti-corporate liability; and framing environmentalism as a threat to 'social progress' (Jacques et al., 2008). Each of these strategies will be briefly discussed in turn.

The first strategy—manufacturing uncertainty—seeks to directly challenge the legitimacy of climate change science and its findings (Jacques et al., 2008; McCright & Dunlap, 2000, 2010). For example, in 1998, the American Petroleum Institute (API) created the "Global Climate Science Communication Action Plan." A memo summarizing its purpose proclaimed, "victory will be achieved when average citizens

‘understand’ (recognize) uncertainties in climate science; recognition of uncertainties becomes part of the conventional wisdom” (Hogan & Littlemore, 2009, p. 43). To accomplish this, individuals and institutions exploit scientific uncertainties, purposefully misinterpret peer-reviewed research, and selectively present data that supports anti-reflexive counter-claims (McCright et al., 2013, p. 3). Discourse is manipulated through a strategic use of certain words and phrases such as ‘uncertainty’ and ‘junk science’. These terms, along with others, are repeated continuously throughout a wide variety of conservative media sources – referred to as an ‘echo chamber’ (Elsasser and Dunlap, 2013) - to normalize uncertainty within the scientific field of knowledge production (Herrick & Jamieson, 2001).<sup>10</sup>

Although science, to some extent, has always been politicized (Gauchat, 2012), AR forces seek to amplify this by actively shifting the measure of scientific validity away from traditional measures of peer review and consensus found in science, toward cultural measures and worldviews such as those ideological affinities that drive politics. Scientific results that challenge strongly held notions and values are attacked, and the intentions of those who publish them are questioned. This is evidenced by the work of Mooney (as cited in Gauchat, 2012), that shows how ideology and political party affiliation played only minor roles in determining trust in science up until the 1970s. Throughout the rise of impact science, liberal views toward science in the United States

---

<sup>10</sup> Uncertainty amongst science does exist regarding specific details of AGW (such as ‘tipping points’ and time scales). However, the uncertainty promoted by CTTs refers to uncertainty regarding the existence of AGW and the role of human beings in producing it.

remained consistent post 1970s, while conservatives became increasingly distrustful and remain so today (Gauchat, 2012).<sup>11</sup>

McCright et al. (2013) explored this further and found that conservative distrust of science is specific to impact science; in fact, conservatives were found to have greater trust in productive science than liberals. This affinity toward one type of science was found in Canada as well. Amend and Barney (2016) reject the widely held notion that Prime Minister Harper's Conservatives are, broadly speaking, anti-science. They concede that Harper oversaw budget cuts to *certain* areas of research, limited the ability of scientists to discuss their findings, and implemented structural adjustments to research in general, but contend that science and technology spending remained relatively consistent with that of previous Liberal governments - with the exception of one budget decrease in 2014-2015. They show that, rather than cutting science and technology spending altogether, the Harper Conservatives re-directed it to initiatives matching their own ideological positions.

In the U.S., political affiliation is a primary factor in determining an individual's position on climate change (Dunlap, 2014; McCright & Dunlap, 2010, 2011a; McCright et al., 2013). This political divide is apparent in Canada as well; in a PEW survey 45% of Conservatives, 71% of Liberals, and 72% of NDPs in Canada answered 'yes' when asked if climate change will harm them personally (Stokes, et al, 2015). These differences are starker in the United States. When asked whether AGW is a serious

---

<sup>11</sup> Gauchat's study focused primarily on political ideology. He necessarily clarifies the distinction between political ideology and party affiliation. He notes that a correspondence, not an equivalence exists between the two.

problem, 20% of Conservatives, 41% of Independents, and 68% of Democrats answered “yes” (Stokes, et al, 2015). Studies seeking to outline the factors related to climate change beliefs have found the same political polarization. For instance, in a U.S. based study focused on aggregate shifts of opinion over time, Carmichael and Brulle (2016), found that political affiliation, and more specifically, the public position of elite politicians, was the most significant factor related to the perception of climate change.

The second strategy—emphasising the need to prioritize other problems (social, economic) over environmental ones—shifts the focus away from environmental issues towards other social issues such as disease, poverty, and war. Proponents of this approach oftentimes acknowledge the existence of AGW, but insist that there are other, more pertinent, issues that must be addressed first (Jacques et al., 2008). Danish ‘game theorist’, Bjorn Lomborg, is perhaps the best-known purveyor of this approach. In 2004, Lomborg, along with four Nobel Prize Laureate economists, conducted a study seeking to prioritize the world’s problems according to the cost efficiency in dealing with each. They placed HIV/Aids prevention at the top of the list and AGW near the bottom. Leaving aside the study’s blatant moral disregard, the premise and subsequent conclusion haphazardly separated issues that are deeply interconnected. That is, many of the issues on the list they produced share common underlying mechanisms constituting their manifest form. While shifting the focus away from AGW is rife with logical fallacies, the strategy has shown itself to be effective in serving its purpose of distracting the public and obscuring the issue (Hoggan & Littlemore, 2009).

The third strategy—anti-corporate liability and anti-regulation—is based on a neoliberal paradigm which “theoretically” emphasizes the need for individual freedom

and autonomy (Harvey, 2005). This approach assumes that the marketplace provides the necessary incentives for protecting the environment, and that the well-being of a nation's individuals is primarily determined by the wellbeing of its economy. Both assumptions have been shown to be historically false. Unregulated markets provide the incentive for greater levels of exploitation for increased profit, and careless pollution to minimize costs (Harvey, 2005; Schnaiberg et al., 2003). Furthermore, directly tying the economic prosperity of a nation to the well-being of individuals assumes that wealth is evenly distributed and ignores the relationship between workers and capitalists. This assumption has long been disputed, most recently by Piketty (2014).

The fourth and final strategy—framing environmentalism as a threat to social progress and “the American way of life” (Jacques et al., 2008)—represents the core of anti-reflexivity and is the closest it gets to revealing its underlying ideological drive. This strategy is particularly effective due to its natural affinity with the pre-existing, widely held (primarily in the West), worldview of continual progress – referred to in the literature as the Dominant Social Paradigm (Dunlap and Van Liere, 1984). It is conservative-based, and sees human prosperity following from the unlimited exploitation of natural resources, their transformation into commodities, and the economic growth that follows (McCright & Dunlap, 2000). Reflection on environmental damage challenges this deeply held notion, and environmentalist prescriptions proposing the need to reduce consumption and production are often met with resistance. Further still, reflexivity refers specifically to a reflection on one's worldview; that is, a reflection on those beliefs and values that frame understandings. Therefore, the very suggestion of

environmentalism may be viewed as threat to an individual's (or social group's) way of life.<sup>12</sup>

**2.5.3 Practice theory: Fields of struggle.** Trumbo (1996) asserts that the media's power to construct reality draws in various actors and institutions to assert their preferred narrative. He goes on to say that the media "provide[s] a series of arenas in which symbolic contests are carried out among competing sponsors of meaning" (Trumbo, 1996, p. 270). Brulle et al. (2012) find that 'elite cues' transmitted through mass media (along with structural and economic factors) have the largest effect on public concern of AGW. Bourdieu's theory of practice and, particularly, the concept of 'field' provides an explanatory framework for delineating this struggle over meaning in practice. Bourdieu (1998) asserts that social spaces, existing in all realms of social experience – politics, economics, culture and so on - are abstract conceptions that have real world consequences. Influence over the social construction of meaning within these spaces, and the multitude of sub-spaces constituting them is determined through the continuous struggle over possession of capital by groups and individuals. Capital refers to resources considered valuable to a particular field (e.g., assets as economic capital, or knowledge in cultural capital, and so on).

Symbolic capital is a unique form of capital, conceptualized as a measure of legitimacy and prestige. According to Bourdieu (1998, p. 47): "symbolic capital is any property (any form of capital whether physical, economic, cultural or social) when it is perceived by social agents endowed with categories of perception which cause them to

---

<sup>12</sup> The third and fourth strategies will be discussed in greater detail in the fifth chapter of this thesis.

know it and to recognize it, to give it value.” Possession of this capital provides an individual or institution the power to construct reality through preferred narratives of understanding. For example, religious leaders possess this capital and use it to promote their dogma. Politically speaking, those with greater levels of symbolic capital possess the power to maintain, adjust, or replace popular discourse. While the possession of symbolic capital necessarily grants power to influence discourse, it would be incorrect to assert that a prominent discourse solely determines what people think. Following CR, discourse is a mechanism that, through its interaction with other mechanisms (e.g., non-discursive practices, cognition, affect), manifests certain perceptions of climate change. However, it is worth noting that discourse, as it pertains to this study, is itself the outcome of a multitude of interacting variables - a process delineated and elucidated in the discussion section below.

The cultural capital of science in the U.S. gave it the greatest share of symbolic capital regarding knowledge production about material phenomena – as opposed to spiritualism (religion) or morality -throughout much of the 20<sup>th</sup> century (Gauchat, 2012). This began to change in the early 1970s (Gauchat, 2012). Although Gauchat (2012) was not applying Bourdieu’s theory of practice during his investigation into public trust in science from 1974 to 2010 in the U.S., he indirectly provided an operationalized measure of the symbolic capital held by science during this time. The decline in trust in science amongst conservative Americans over this period reveals a loss of symbolic capital by science as a whole – both scientists and the institutions of science to others.

The battle over capital in climate change discourse is not necessarily refereed but is ultimately judged by the public. A greater disconnect between the views of the public

and science spheres inherently translates to a decline in symbolic capital for science, or at the least, impact science. Aligning neatly with the arguments posed by the anti-reflexivity thesis – although not adopting the framework per se – Gauchat’s (2012) work shows that conservative ideology and those who seek to disseminate its discourse have captured the capital lost by science. Young and Dugas (2011) provide evidence for this in Canada. They found that articles containing an expert knowledge claim (based in the natural or social sciences) declined from 65% in 1988/1989 to 21% 2007/2008. This coincides with a marked decline of mentions of climate change causation in 85% of articles in 1988/1989 to 13% in 2007/2008. Their research also revealed a shift of AGW coverage in the Canadian news-media from stories covering occurrences in the natural world, new scientific discoveries or publications, and science events, to political events and suggested remedies. Freudenburg (2006) provides insight into what this means in terms of power dynamics.

**2.5.4 Double diversion: The role of power.** Freudenburg (2006) argues that discourse disseminated through major media sources is largely influenced by elite ideology. His double diversion theory contends that elite members of society simultaneously maintain unequal access to natural resources (including waste sinks) and the ability to delimit discourse. Privileged access to natural resources provides privileged accounts of the social/environmental dynamic. The common assumption that much of the environmental damage is a *necessary* side effect of economic practices is false. Freudenburg’s research demonstrates that oftentimes major polluters neither produce advanced materials nor provide high levels of employment (Freudenburg, 2005). These major polluters, however, have become extremely wealthy and use this wealth to access

opportunities for manipulating discourse. It is through these privileged accounts that privileged access remains socially acceptable.

Privileged accounts provide individuals and groups the capacity to normalize their ideological discourse through unequal access to various forms of popular media (e.g., news, television shows, and advertisements). Connecting the ideological discourse of those with privileged access with that espoused by popular news-media outlets does not, by itself, provide definitive proof that privileged accounts exist in a specific location; however, establishing this connection is a necessary first step in elucidating the relationship.

Carvalho (2005) clarifies this relationship by discussing the role of hegemonic ideology in the media. She argues that plurality and diversity exist to a limited extent. Ideologies are social constructions which are interpreted individually, and news organizations oftentimes seek to increase their legitimacy through demonstrating objectivity. However, she ultimately concludes that an ideological culture exists that “avoid[s] a sustained critique of the possibility of constant economic growth and increasing consumption, and of the profound international injustices associated with the greenhouse effect” (Carvalho, 2005, p. 21).

Murphy’s (2015) examination of AGW discourse in Canadian news-media highlights the prominence of AGW framing that is preferable to elite ideology – specifically, the construction of AGW as a ‘non-problem’. Castells (2009) asserts that the elite wield power in media and use this in a myriad of ways – such as ‘spinning the news’. Freudenburg (2005) contends that this is accomplished largely through ‘diversionary reframing’ whereby an uncomfortable question is avoided by reframing the discussion to

be about something else. For instance, concerns over corporate damage to the environment may be re-framed as corporate benefits to municipal economics and services. Katz-Rosene (2016) exemplifies this when he delineates how the form, content, and purpose of discursive reframing of energy supplies evolved to address spatio-temporal conditions in the Alberta oil sands.

## **2.6 Conclusion**

The socio-historical conditions outlined briefly in the introduction combined with the literature review presented here form a solid foundation for an exploratory study into the role of AR Forces in Canadian news-media. Further, Beck's reflexive modernization theory, McCright and Dunlap's AR thesis, Bourdieu's theory of practice, and Freudenburg's double diversion theory provide theoretical frameworks of understanding necessary (but not sufficient) for drawing inferences from the results. The application of these theories must be meticulous and mindful of ontological and epistemological considerations. This is especially difficult considering the scale and complexity of AGW and the number of theoretical frameworks presented. A critical realist (CR) meta-theoretical framework is utilized here to address both concerns. The following chapter outlines the process by which CR guides research methodology, methods, and analysis.

### **Chapter 3: Methodology and Method**

Research, whether natural or social, is inevitably premised on assumptions regarding the nature of reality and our relationship to it (Sayer, 2000). The importance of grounding research in clearly stated, firmly held, ontological and epistemological positions cannot be overstated. Oftentimes such positions are implicit in research methods and it is assumed that the methodology, methods, and conclusions are ontologically and epistemology consistent. This is problematic, however, because implicit assumptions that are not critically considered may undermine the entire project and paradigm.

The research conducted here follows the ontological and epistemological positions espoused by critical realism (CR). CR maintains the realist position that the world exists independent of our knowledge (intransitive dimension), and that our knowledge of it (the transitive dimension) is necessarily mediated through our individual and social conceptions, which are always changing and therefore fallible. The success of knowledge gathering is ultimately measured by the correspondence between the transitive and intransitive dimensions; an endeavour which can never be fully realized due to the necessary, and disrupting, mediating concepts of theory. This is especially challenging for social scientists who develop social constructions of social constructions – a phenomenon referred to as the double hermeneutic.

CR contends that, ontologically speaking, reality is structured, differentiated, and stratified (Danermark, et al., 2002). Asserting that reality is intelligible presupposes that it is composed of structures that we may discover and develop understandings of. While the reality of the world is differentiated into the transitive and intransitive dimensions, ‘what reality is’ is stratified into three parts: the empirical, the actual, and the real

(Danermark et al., 2002). The empirical domain of reality is that of experience (i.e., perceptions of our senses); though it should be noted that all experience is further mediated through theoretical conceptions. Empiricism and positivism presuppose this to be the only valid domain of study. CR rejects this assumption, contending that empirical validity through causal conjunctions only exposes potential relations between phenomena and not the nature of these relations (Bhaskar, 2008).

Elucidating the nature of phenomena and their relations requires exploring of the ‘real’ dimension where mechanisms exist and interact. Structures have causal mechanisms that constitute the manifestation of phenomena: objects, agents or events. All mechanisms have powers and liabilities; that is, they can influence, and be influenced by, other mechanisms (also referred to as conditions). Dynamic combinations of mechanisms and conditions manifest phenomena that appear in the ‘actual’ domain; these may be sensed, measured, or manipulated in the empirical domain. The real domain is not directly accessible through the senses and can only be delineated through logic (framed using theory) combined with physical perceptions of the empirical domain (Danermark et al., 2002). Knowledge building, according to CR, proceeds by developing an understanding of causal powers and liabilities of objects within this domain. That is not to argue that perceptions of the empirical should be dismissed, rather, that observations of the empirical should be used in tandem with abstract reasoning to inform our understanding of the real. This approach will be followed here.

The actual domain exists between the empirical and real. In this space, events happen regardless of whether they are experienced or not. This concept is used primarily to illustrate the separation between events and experience. While events in the empirical

domain are mediated through internalized conceptions of a perceiver, those in the actual domain are either not experienced at all or mediated through the perspective of others relaying their conceptions of events.

Understanding the nature of an object - whether it be a material thing or event - requires assessing which mechanisms are necessary for a phenomenon to “exist at all and be what it is” (Danermark et al., 2002, p. 44). Mechanisms both constitute and exist within a unique context that allows phenomena to manifest. This context is conceptualized as the ‘transfactual condition’. Because mechanisms are not directly accessible through sense perception they must be conceptualized abstractly, operationalized, and then compared to events manifested in empirical reality. This procedure is referred to as conceptual abstraction. Conceptual abstraction consists of the application of theory (*abduction* in CR parlance) to contextualize phenomena within frameworks of understanding, followed by pragmatic research to establish how close a framework is to describing the empirical reality of the phenomenon.

The relationship that exists between higher and lower level mechanisms is clarified by CR’s claim that reality is stratified. That is, structures can be broken down into smaller parts that exist on lower level strata. Phenomena are constituted by the relationship between a causal mechanism of a structure interacting with conditions that either activate or prevent it from producing its power. In the simplest sense, the framework obligates fastidious clarification of how ‘things’ relate to one another.<sup>13</sup> The differentiated,

---

<sup>13</sup> This point may seem redundant, but the complexity of social science’s subject matter (in general) and history of empiricism (specifically) requires that we continually remind ourselves of what the purpose is.

structured, and stratified nature of reality logically presupposes that most, if not all, phenomena exist in an 'open system' - that is, the infinitude of structures composing reality continually influence one another, leading to the dynamism and unpredictability characteristic of experience. Mechanisms on the lower level stratum are less susceptible to change due to their relative lack of complexity (i.e., composed of less constituent mechanisms) compared to those on the higher level.

The philosophical points discussed in this brief outline of CR have been elucidated and debated vigorously for over thirty years (see Archer, 2000; Bhaskar, 2008; Gorski, 2013; Sayer, 2000). The finer details of CR, and the arguments posed by its critics are beyond the limitations of this thesis. However, this brief review of CR provides this research with a higher level of internal consistency by clarifying its ontological and epistemological assumptions. CR ultimately provides a framework for the entirety of the project - ranging from abstract theorizing and conceptualization to the pragmatic, more concrete observations. The following sections detail this process.

### **3.1 Methodology: Guiding the Approach**

In seeking to reveal tendencies and form an understanding of the transfactual conditions constituting the discourse of anthropogenic global warming (AGW), this research follows the six stages of research outlined by Danermark et al. (2002): (1) *description*, which describes a phenomenon (an object or event) and includes individual interpretations ; (2) *analytical resolution*, which narrows the focus of research by separating out the necessary components for study ; (3) *abduction and theoretical redescription*, which involves reframing the phenomenon in order to provide a new and unique understanding of it ; (4) *retroduction*, which seeks to reveal the generative

mechanisms that determine “how a phenomenon exists” and “what properties must exist for it to be what it is”; (5) *comparisons between different theories and abstractions*, to determine the explanatory power of the mechanisms discovered and the theory employed; and (6) *concretization and contextualization*, which involves moving from abstract conceptualizations (steps 2-5) back to the concrete – an important and necessary process referred to as “the double movement” (Sayer, 2010, p. 59) - to determine how these mechanisms manifest and function in different contexts.

Answering the research question involves discovering discursive tendencies in newspaper articles and demonstrating their generative mechanisms; therefore, quantitative and qualitative methodologies are both utilized. This approach procures and utilizes extensive (i.e., broad) and intensive (i.e., deep) data for analysis (Danermark et al., 2002).<sup>14</sup> The decision to proceed with a mixed methodology follows CR’s rejection of methodological incommensurability – the position that quantitative and qualitative methodologies cannot be used in conjunction (Danermark et al., 2002). CR presumes a ‘third way’ (referred to as critical methodological pluralism) whereby empirical observations can be combined with structural analysis to simultaneously provide breadth and depth of a research topic (Danermark et al., 2002).

---

<sup>14</sup> CR problematizes the use of the concepts ‘quantitative’ and ‘qualitative’ but continues to use them (likely due to their deeply entrenched role in research methodology across the social sciences). CR prefers the use of ‘extensive’ and ‘intensive’ research methodologies instead (Danermark et al. 2002). To maintain clarity, the research here will assume that the historical conceptions (quantitative/qualitative) refer to the methodology applied and the CR concepts (extensive/intensive) refer specifically to the data collected using these methodologies. This approach is meant to provide intelligibility to readers unfamiliar with CR concepts.

Content analysis is useful for analyzing “message characteristics” and “human interactions” (Neuendorf, 2002, p. 1). It can be utilized for both quantitative and qualitative research (Altheide, 1987; Bengtsson, 2016; Neuendorf, 2002; Weber, 1990). However, according to Krippendorff (2004, p. 16): “Ultimately, all reading of texts is qualitative, even when certain characteristics of a text are later converted into numbers.”<sup>15</sup> He goes on to argue that the dichotomy of quantitative and qualitative methodologies, with respect to content analysis, is problematic and that the use of both approaches is indispensable. These positions transcribe neatly onto the CR framework and are taken here. Quantitative content analysis is used in this research to count claims and frames to reveal tendencies, while qualitative content analysis contextualizes text, and captures narratives, actors, and institutions. Content analysis is better suited to address the research question here compared to other hermeneutic methods such as discourse analysis, because of its well-established and widespread use in sociology, its replicability regarding discursive tendencies (as opposed to the highly subjective nature of discourse analysis), and its usefulness, and relative ease, for combining methodologies.

---

<sup>15</sup> This problematic nature he discusses became clear early in the process. Some stages of the research are situated more clearly in one methodological approach, while others are mixed. For instance, the initial data analysis consisted of the objective enumeration of key indicators (e.g. prominent authors, amount of GCC articles devoted to GCC, and so on) to provide data for quantitative inferences (based on statistical operations). Coding, however, is more methodologically nuanced. While codes were chosen deductively (with some iteration), and sampling procedures procured validity and reliability (to the extent possible), the coding process itself cannot reach the level of objectivity required by quantitative standards. Coding in this instance is ultimately qualitative, even though the results drawn from the operation are quantitative. The details of this critical methodological pluralism are described below.

## 3.2 Methods

**3.2.1 Description.** Research began with a description of policy and energy in Canada outlined in chapter one to provide the necessary background context for the study. Six anti-reflexive (AR) claims and five thematic frames and were drawn from the review of the literature to guide the research in subsequent stages. The six AR claims have been identified as common themes espoused by AR forces (Freudenburg, 2005; Jacques et al., 2008) and are used here to reveal the presence of AR discourse in the data. The five thematic frames are well established concepts that have been operationalized and used in other studies of Canadian new-media coverage of AGW (see Stoddart et al., 2016).

### 3.2.2 Analytical resolution

**Data set.** Two prominent Canadian newspapers – The Globe and Mail (G&M) and The National Post (NP) – and the published works (online) of two Canadian conservative think tanks (CTTs) – Fraser Institute (Fraser) and the C.D. Howe Institute - were chosen for analysis. According to Stoddart et al. (2016), these newspapers provide the closest general representation of newsprint-media in Canada for three reasons: they are the only nationally circulating print newspapers; they have high circulation numbers; and they are considered ‘legacy media’ (Lester and Hutchins, 2012). However, it should be noted that the political positions typically espoused in these newspapers are not representative of all Canadian newspapers. This is especially pertinent for French-language newspapers, which have been shown to have some significant differences from English-language newspapers (Young & Dugas, 2012). Both papers are primarily oriented to Canada’s business class but represent somewhat distinct political positions. G&M is, arguably, centrist while NP leans more conservative (Stoddart et al., 2016). In 2015, G&M and

NP maintained an average weekday print circulation of 323,133 and 186,353, respectively (Levson, 2015).

According to the Global Go To Think Tank Index published by the University of Pennsylvania – which ranks think tanks according to a wide range of criteria such as quality of research, quality of staff, overall output, and media reputation - Fraser and C.D. Howe rank first and second, respectively, among think tanks with the most significant impact on public policy in Canada (McGann, 2015). Fraser was created in 1974 as a non-profit institution to promote conservative ideals, such as limited government intervention in the economy. It maintains these ideals as evidenced by its production editorial pieces (often included in popular newsprint) and conservative books. This think tank was chosen for its prominence in the country and its tendency to insert itself into the climate change debate through op-eds and its printing press (for example, the denial book “Global Warming: A Guide to the Science in 2001,” co-authored by the famous climate change denialist, Willie Soon).

C.D. Howe was formed in 1973 through a merger of two organizations: The Private Planning Association of Canada (founded in 1958), and the C.D. Howe Memorial Foundation (founded in 1961). According to the Institute it seeks to “influenc[e] Canada’s policy agenda in a direction that builds comparative advantage and leads to a strong economic future” (C.D. Howe, 2014). C.D. Howe was chosen for this analysis because of its prominence in Canada and affiliation with fossil fuel companies and organizations. It is a non-profit organization that is funded by donations from individuals, organizations and corporations. Corporate sponsors include many of the major players working in the Canadian energy sector such as Devon Canada

Corporation, Enbridge, Husky Oil, Imperial Oil, Shell Canada and Suncor. The Canadian Organization of Petroleum Producers, an organization consisting of Canada's top energy corporations which promotes their unified interests, is also listed on the Institute's site as a contributing member.

The data set consists of articles (including news, editorials, letters, opinions and op-eds) published by the four sources between July 1, 2015 - July 1, 2016. This time-period was chosen with the expectation that coverage of climate change would increase in the six months leading up to United Nations Conference of Parties 21 (COP21) in Paris (November 30, 2015 – December 12, 2015) and remain above average throughout the six months following it. Letters, opinions and op-eds were included in the data set to capture the broadest range of discourse published in both newspapers. While 'news' articles are more objective and formal, letters, opinions, and op-eds provide insight into how elite social leaders, such as Rex Murphy, and individuals drawn from the public frame issues. Further, the editorial decision to publish specific letters, opinions, and op-eds reflects the range of discourse considered to be acceptable by a newspaper.

A search for the terms (located "anywhere in the document") "climate change" or "global warming" within the "news" document type was conducted in the Canadian Major Dailies database. The search produced 833 and 626 articles in G&M and NP respectively. Op-eds (referred to as articles from here for simplicity) from the two think tanks were downloaded directly from their websites. Both websites contain search engines that were used to search for documents containing the same terms listed above. The search found 40 articles produced by Fraser and 12 by C.D. Howe.

*Sampling and cataloguing characteristics.* Data analysis began with tallying all news documents produced by the newspapers over the date range discussed to determine the percentage of AGW coverage relative to all news. Each article was downloaded along with excel spreadsheets that catalogue the articles and outline their relevant details (e.g., author, date published and so on). Each article was read to determine if climate change was: (1) the primary topic of the article, (2) a secondary, but still important, topic of the article, (3) only mentioned in passing, and not dealing with climate change in any considerable way. Articles falling into the third category were removed, leaving a total population – the total number of articles over the time period covering AGW or subjects related directly to it - of 530 from G&M and 409 from NP. Proportionate stratified sampling was utilized. Articles were stratified by newspaper to increase the probability that the two samples accurately represented their specific sub-populations and systemic samples were drawn from each population. The number of articles drawn from each was calculated to provide a 95% confidence level with a 5% margin of error. This resulted in 223 G&M (42% of the G&M population), and 199 NP articles (49% of the NP population). Each population was loaded into its own spreadsheet and arranged by date. The G&M sample was drawn systematically with a random start. Beginning with the second article (chosen by dice roll), every third article was drawn along with an extra article every fourth draw. Drawing from the NP population began with the second article (randomly selected by roll as well), then every second article thereafter.

This systemic approach captured a broad range of article types in both newspapers that covered a well distributed spread across the entire time-period, with some clustering

in November, December, and January. This increase in coverage was expected considering the much anticipated COP21 event took place in mid-December.

***Content coding*** – Extensive analysis. Content analysis consisted of coding AR claims Reflexive (RF) claims, and thematic frames; and then capturing individual and institutional ‘voices’ in the data. The specific methods of each will be discussed in turn. Coding for these claims and frames was mutually exclusive, deductive, and iterative.<sup>16</sup> The claims and frames, along with their descriptions, are listed in tables 1-3. Sampled articles were examined to determine the presence of the 9 claims listed below, along with their relative usage. It was possible for an article to contain up to 9 different claims and each claim could be captured more than once in each.

The AR claims were drawn from a review of the literature. These concepts were not conceptualized as ‘claims’ per se in the literature, but rather as broad strategies from which claims would naturally follow. Maintaining an affinity with the original concepts (see Freudenburg, 2005; Jacques et al., 2008) was preferred to ensure their operationalized form accurately captured the pre-established theoretical construct. Therefore, the operationalization of these concepts as claims (summarized in the ‘description’ column of table 1) involved minimal modification, mirroring the descriptions outlined in the literature.

---

<sup>16</sup> Inter-coder reliability of these sets (measured in two-phases of pilot testing) yielded a Cohen’s Kappa of 69% which is considered as “satisfactory or solid agreement (Burla et al., 2008). Details of this process can be found in the Appendix C

*Table 1: Anti-Reflexive Claims*

<b><u>Anti-Reflexive Claim</u></b>	<b><u>Description</u></b>	<b><u>Example</u></b>
Manufacturing uncertainty	Seeks to convolute the established literature by suggesting that the science regarding the existence (or cause) of AGW has not been settled and is still being debated; may outright reject the legitimacy of science altogether.	"Scientists cannot seem to agree on whether climate change even exists, let alone begin to understand why it might."
Prioritizing of economic and social problems over environmental problems	Argues that there are currently more pressing social and economic problems that should be addressed beforehand, such as poverty and starvation.	"Our main focus right now should be the aids epidemic in Africa, rather than potential threats 100 years from now."
Anti-regulation and/or anti-corporate liability	Insists that environmental regulations and penalizing corporations for damaging the environment are illegitimate measures. Not scepticism per se but follows from the other claims and is often connected to them.	"Corporations are the backbone of our economy, punishing them hurts everyone."
Environmentalism as a threat to western progress	Argues that production and consumption have driven the 'development' of society and must be allowed to continue. Environmental actions threaten these and, therefore, society as a whole	"Fossil fuels have allowed western society to develop in ways that we could have never imagined, how can we take them away from countries who are struggling to develop."
Diversiory reframing	Attempting to divert attention away from an uncomfortable question by trying to reframe the debate as being about something else.	"Canada's oil is ethical because this country is more ethical than others like Saudi Arabia."

*Note.* Manufacturing uncertainty, prioritizing of economic and social problems, anti-regulation, and environmentalism as a threat drawn from Jacques et al. (2008); diversiory reframing drawn from Freudenburg (2005)



RF claims were developed specifically for this thesis to represent counter positions of AR. Assessing the frequency of AR claims without recognizing the existence and frequency of counterclaims would limit the inferences that could be drawn regarding their usage and subsequent influence on AGW discourse (e.g., hundreds of AR claims may have little power to influence the discourse if there are thousands of RF claims to compete with). Therefore, RF claims were captured to weigh the importance of AR claims. These are outlined in Table 2 along with their operationalized descriptions and examples.

*Table 2: Reflexive Claims*

<b><u>Reflexive Claim</u></b>	<b><u>Description</u></b>	<b><u>Example</u></b>
Validity of scientific literature	Asserts scientific certainty regarding existence, and cause, of global climate change.	"The claim that scientists disagree over the existence of climate change is utter nonsense. The science on that is settled."
Recognizing impacts on environment and subsequent impacts on other issues	Discusses problematic (i.e., negative) climate change impacts. May recognize the role of environmental problems in causing/exasperating other social problems (e.g., economic, energy systems etc.).	"The prevalence of superstorms will continue to rise as we increase our fossil fuel consumption."
Promoting regulation and corporate liability	Suggests the government take action to restrict industries or individuals from damaging ecosystems and/or threatening wildlife. Includes initiatives, arguments, and/or position taken to transition off fossil fuels	"Fossil fuel companies will continue to increase production so long as the government allows them to without penalty and the market rewards them for their destructive tendencies."
Questioning the idea of 'progress'	Ask whether our current economic system is viable? Questions if maintaining the status quo is worth the environmental destruction that it brings?	"Can the planet survive continuous economic growth?"

Content analysis of thematic frames was used to capture broad themes, or categories of understanding, in the data. Their inclusion in the analysis illuminates the discursive frames utilized for discussing AGW, or topics related directly to it (such as energy use). In addition to this measure being independently useful, the information can be further combined with the AR and RF claims to better understand how these are woven into thematic frameworks of understanding.

Thematic frames (Table 3) were drawn directly from Stoddart et al. (2016). Their work, discussed previously in the literature review, was part of a cross-national research project – *Comparing Climate Change Policy Networks (COMPON)* - to assess the news-media's coverage of AGW.<sup>17</sup> This prior, well-established usage significantly increases confidence in their reliability, and their inclusion here will hopefully build on the COMPON work. Each article was assessed to determine the primary thematic frame (and secondary frame if present) for structuring the discussion. These frames provide a lens through which readers contextualize and perceive claims. Articles framed in economics, for example, reflect different realities and concerns than those within an ecological/meteorological frame.

---

<sup>17</sup> These themes were defined previously by the principle investigator of the COMPON project and have (so far) been used across 19 different analyses to compare nation's framing of the GCC (with modification within cases).

*Table 3: Thematic Frames*

<b><u>Thematic Frame</u></b>	<b><u>Description</u></b>
Ecological/meteorological	Focus on the natural environment, including climate change impacts on animals or vegetation, or on weather events and patterns.
Policymaking and politics	Focus on government policy responses and political debate. Includes public opinion or activities by non-governmental organizations (e.g., environmental campaigns and protests).
Economic and energy interests	Focus on the economic costs of climate change impacts and responses, or climate change as it relates to energy production, and energy production interests.
Culture	Focus on individual lifestyle in relation to climate change, or on popular culture (tradition, religion, movies, books, celebrities, music, fashion) in relation to climate change.
Science and technology	Focus on scientific findings/discussion and communication, or on the development and application of new technologies.

(Stoddart et al., 2016)

Content analysis was also used to capture individual and institutional voices speaking on AGW issues (including energy or energy systems) to determine the “primary definers” of key issues (Anderson, 2009). This inductive process catalogued each article’s sources of information on issues concerning AGW and energy systems, whether quoted directly, paraphrased, or drawn from positions outlined in documentation (e.g., government policy). No limits were set on how many individuals or institutions could be captured in a single article.

The use of quantitative content analysis here, rather than simply being a “shallow counting game” (Krippendorff, 2004), was used to delineate demi-regularities (i.e., tendencies) in the data to provide a description of the concrete (Danermark et al., 2002, Fletcher, 2017). Demi-regularities were identified by analysing the individual results of each coding category and areas of subsequent overlap between them. The process of coding was the same for news articles and CTT articles. This analysis presented a broad overview of the data to be used as starting point for the qualitative analysis that followed.

Content analysis revealed an abundance of AR in Fraser and NP which necessitated additional research into both. A list of the non-profit’s board members was drawn directly from Fraser’s website and the corporate affiliations of each individual member were researched online using Google searches to determine connections to fossil fuel corporations. Information was primarily drawn from Bloomberg.com and corporate websites profiling individual membership. Further, information regarding Fraser’s finances was drawn from the Government of Canada website and presented in the results section that follows. Searches for all news-documents produced by prominent purveyors of AR in NP were conducted using the Canadian Major Dailies to ascertain the number

of articles produced by each over time. Additional research into their biographies and controversies, specifically regarding climate issues was also conducted.<sup>18</sup>

**3.2.3 Intensive analysis, abduction, and retroduction.** Qualitative analysis was pivotal for addressing the research question and involved a case study of the prominent AR discourses discovered earlier through quantitative analysis. Uncovering prominent claims, individuals, and institutions provides a broad depiction of discursive tendencies but cannot, on its own, demonstrate the underlying mechanisms manifesting them. This requires a deeper analysis of the texts in conjunction with the existing literature. Therefore, this process included abduction and retroduction (Danermark et al., 2002).

Demonstrating the role of underlying mechanisms began with observing how claims in all four sources are expressed by individuals and institutions, how they are used within the context of an article, and how they fit within the larger context of AGW discourse in Canadian media. These claims were then assessed using retroduction, guided by abduction. Retroduction reveals the structure and mechanisms manifesting the generation of AR discourse by asking a series of questions such as: how is AR discourse possible? What properties must exist for AR discourse to be what it is? What mechanisms are related to AR discourse and how do they interact (Danermark et al., 2002, p. 110)? The process of retroduction in this thesis was more an effort to confirm or reject the assertions of the existing literature, rather than reveal an unknown mechanism. Abduction was engaged more throughout. This involves examining phenomena through

---

<sup>18</sup> Sources for this specific research primarily consisted of prominent online Canadian news sites such as CBC, Globe and Mail, and National Post.

a pre-established framework of understanding (Danermark et al., 2002). More specifically, abduction re-describes and reconceptualizes phenomena (Lennox & Jurdi-Hage, 2017). This is an important step that transcends ‘common sense’ framing of phenomena in everyday life to provide it with new meaning (as cited in Danermark et al., 2002). That is, abduction moves beyond empirical observations and deeply rooted (heuristic) assumptions to provide novel understanding of familiar phenomena.

Well-established (i.e., largely agreed upon) theories provide a necessary framework for the redescription of empirically observed phenomena. Theory provides a template of understanding for detecting meanings and connections that may have otherwise been missed (Danermark et al., 2002). Several theories (outlined in the literature review) were used for this purpose.

These and various abstractions were compared throughout the process to determine their relative usefulness for explaining discursive phenomena. RF and ARF claims were considered in light of an overarching thematic frame, or frames, used to depict a narrative within each article. The professions of articles sources, or voices, were noted, and their position in the ‘field’ of AGW was reflected upon. Theories were also critiqued in consideration of the data, both extensive and intensive, and theoretical commensurability was considered during the stage.

Finally, inferential analysis involved continuous movement between abstract and concrete categories. That is, the conclusions derived from abductive and retroductive inference were re-applied to empirical results to determine how well they could explain the manifest discourse. Prominent interconnected claims, and their potential generative mechanisms and conditions were considered within the newly developed framework of

understanding to better understand their role within the larger context of AGW discourse. The political economy of energy in Canada was briefly considered during this stage to provide context for the structures and mechanisms uncovered in the previous stages of research.

A CR meta-theoretical framework was used to guide the methods outlined here. Critical methodological pluralism provides the extensive and intensive results necessary for exploring the mechanisms and conditions constituting AGW discourse in Canadian news-media. These results, representing the empirical dimension of reality, are delineated in the following chapter and elucidated thereafter.

## Chapter 4: Finding and Results

The exploratory research conducted in this thesis begins by describing and delineating phenomena in the empirical to facilitate further analysis. Broad and complex descriptions, considered in the introduction, are systematically cropped into manageable components using the methods outlined in the previous chapter combined with conceptual frameworks drawn from a review of the literature. This process is guided by the critical methodological pluralistic approach (outlined in the previous chapter), predicated on previous work by others (discussed in the literature review), and informed by descriptive factors specific to the context of the study (detailed in the findings below). The pluralistic approach of Critical Realism (CR) that is employed here utilizes both extensive and intensive methods to expose (1) tendencies and (2) data for further analyses to demonstrate causal groups and substantial relations. The products of this analytical resolution are presented in this chapter.

The chapter begins with a brief outline of the findings that include population and sample characteristics, newspaper coverage of anthropogenic global warming (AGW) over time, the number of authors and their relative contribution (by article), and the sections where AGW is published in each newspaper. The second section discusses and describes the extensive results of this study - the thematic frames, individual voices, and anti-reflexive (AR) and reflexive (RF) frequencies. Tendencies outlined in this section provide the necessary guidance required for the intensive research that follows. The final section of this chapter presents the intensive research results. This incorporates specific strategies utilized by AR forces, and their connections to fossil fuel interests, other AR forces, and major Canadian newspaper-media.

## 4.1 Findings

**4.1.1 Population and sample characteristics.** Stage one of this research (based on CR) consists of describing the ‘concrete’ circumstances in which phenomena manifest. For this study it includes the production of news in general, and news covering the topic of AGW in specific. The news-media data set consists of articles published between July 1, 2015 – July 1, 2016 in two Canadian newspapers. Both newspapers address AGW, but the number of news articles produced over the year, and those covering AGW specifically (as opposed to incidental coverage), varied by newspaper as shown in Table 4.

*Table 4 – Articles Produced by Newspaper*

	<b>Globe and Mail</b>	<b>National Post</b>	<b>Totals</b>
<b>1.) Total Articles Produced</b>	25978	29882	55860
<b>2.) Articles Containing Search Terms</b>	833	626	1459
<b>3.) Articles Covering AGW (Population)</b>	530	409	939
<b>4.) Sample</b>	222	199	421
<b>5.) AGW Coverage (% of Total)</b>	2.0%	1.4%	NA

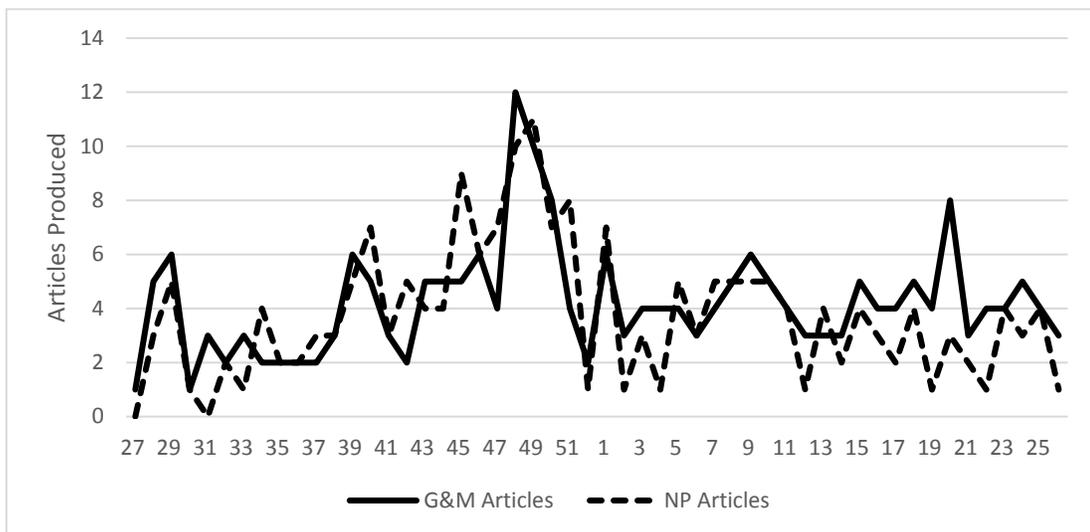
Approximately 35% of articles containing the terms “climate change” or “global warming” have no meaningful coverage of the issue and are not included in the population. These casual mentions of AGW provide some evidence for the argument that AGW has ‘gone mainstream’ and been ‘incorporated into the status quo’ (Young & Dugas, 2011). Still, AGW coverage as a percentage of the total articles produced over the year is minimal in both papers. This finding closely aligns with that of Stoddart et al. (2016), who illustrate comparatively low coverage in the late 1990s (below 0.5%), rising in 1999 to a peak in 2002 (up to 1% in Globe and Mail (G&M) and approximately 0.75% in National Post (NP)), decreasing for two years before dramatically increasing to another peak in 2007 (G&M and NP approximately 2.25%), and continuing to fluctuate thereafter. Their data set concludes in 2010 with both papers containing less than 2.0% coverage of AGW that year; aligning with the findings of this study.

A stratified and systemic sample was drawn from each population of news articles to capture 42% of the G&M population and 49% of the NP population.<sup>19</sup> Chart 1 displays the number of articles produced in each newspaper by week, beginning in the first week of July 2015 and ending in the last week of June 2016. Coverage of AGW is presented over time, along with general similarities and differences in trends across newspapers. It is worth noting that absolute differences in coverage by week cannot be discerned by this; the difference between sample size is not accounted for in this chart (the G&M sample is 1.29% larger than that of the NP).

---

<sup>19</sup> The sample size was chosen in order to produce a 95% confidence level with a 5% margin of error.

*Chart 1 – Sample Coverage by Week*



As expected, coverage increased leading up to Cop21, peaking in both newspapers in the weeks just prior to the meeting itself (last week of November in G&M and first week of December in NP) and dropping at the close of the year. The first week of January saw another increase, but this dropped back down for the remainder of the month and followed a median line for the rest of the study period. The variability of coverage between weeks appears considerable, but two things are worth noting: (1) the limited number of articles being published exaggerates minor differences between weeks, and (2) it is likely that coverage is more consistent when measured over a protracted time period.

C.D. Howe produced 86 Op-Eds over the study period with 12 discussing AGW. While coverage of AGW was minimal, it still represents 14% of the total articles produced by them during this time. By comparison, Fraser produced 716 Op-Eds over the same period - 37 covered AGW (5.2% of the total). The low number of C.D. Howe Op-Eds covering AGW is likely more representative of the total work produced over the time period, rather than a concerted effort to avoid or neglect the subject.

AGW articles produced by C.D. Howe are spread evenly over time. An article was produced in every month, with the exceptions of January, March, and April. The three-months surrounding Cop21 had no substantial increase in coverage. Fraser produced only 5 articles from July to October but published 10 in November alone - clustered in the second half of the month. Surprisingly, Fraser produced only 2 articles in December - the month COP21 was held. Newsprint production similarly rose leading up to COP21 and dropped during the event itself. Worth noting, is the sudden increase in articles produced by Fraser at the end of the study period: 4 articles produced in May and 9 in

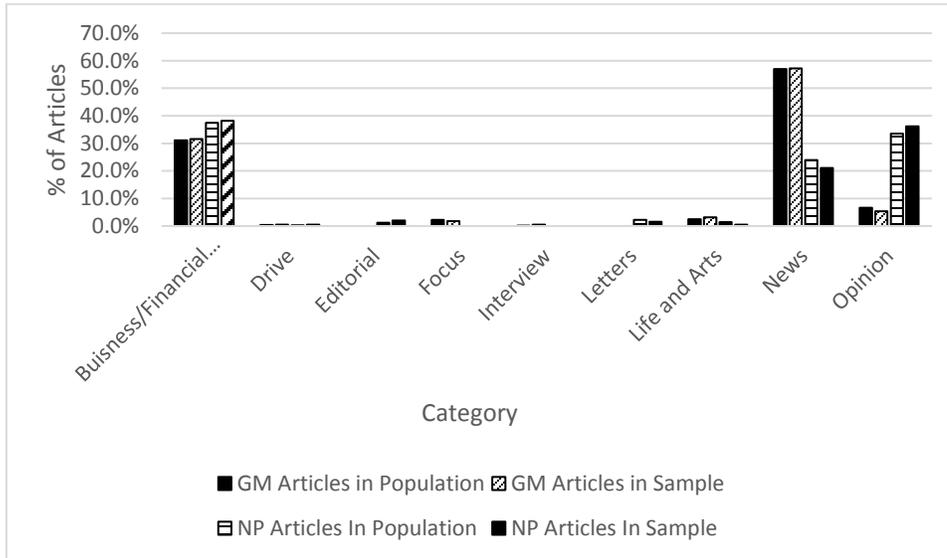
June. Only 7 articles had been produced up to then. Ontario's wide-ranging Climate Change Action Plan (released in June 2016, with pieces leaked prior) was discussed in 6 of the 13 articles. This topic, along with a recently released budget for Alberta, likely led to the increase and adds credence to the argument that AR forces are fundamentally reactionary (discussed in chapter 5).

There are notable differences between newspapers in terms of where AGW discussions are placed (chart 2). G&M coverage of AGW is largely in the news and business sections, while NP published less in news and more in the business and opinion sections.<sup>20</sup> G&M articles tend to contain more objective coverage of prominent AGW news items, while NP articles have more commentary on them. This is an important finding that will be discussed in further detail in the discussion chapter – specifically regarding climate scepticism.

---

<sup>20</sup> Labels for sections vary by newspaper. Therefore, constructing a generic list of categories for comparing G&M and NP required some interpretation. For example, G&M labelled its business section "business" while the NP labelled the same subject matter "financial post." These differences are largely semantic, and any changes resulting from attaching universal labels are unlikely to distort the overall picture represented here.

*Chart 2 – Articles by Section*



## 4.2 Extensive Results: Tendencies in the Data<sup>21</sup>

Extensive methodology produces demi-regularities for guiding research toward causal mechanisms and conditions. Demi-regularities illustrate patterns, distinguishing features, formal relations of similarity, and taxonomic groups (Danermark et al., 2002, p. 165). These characteristics inherently provide a broad description of a given population. The extensive results here illustrate the presence of AR in Canada, its proportion relative to RF, its general form, and the individuals and institutions disseminating it. This section begins with a broad overview of the framing through which AGW is discussed.

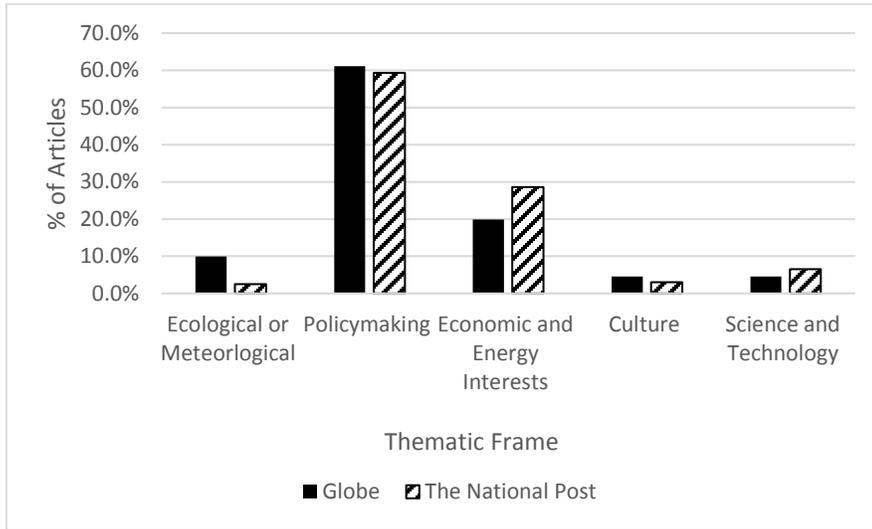
**4.2.1 Thematic frames.** Chart 3 illustrates the percentage of articles coded at each thematic frame. The majority of articles in both papers (60%) are framed within the “policymaking” theme. The “economic and energy interests’ theme” is also prominent with 20% and 29% of articles in G&M and NP respectively. The predominant role of policymaking and business frames, combined with the lack of “science and technology,” “culture,” and “ecological or meteorological” frames, demonstrate an important demi-regularity concerning the narrative construction of AGW. Briefly, this may represent a ‘maturation’ of the subject whereby public discussion no longer sees debates on the science but focuses on political and economic solutions instead. Alternatively, this may signal that AGW has become ‘banalized’; that is, it blends into the normal ‘mainstream’ news cycle, and gets ‘caught up’ in the day-to-day news of policymaking and economic concerns (Young & Dugas, 2011). It may be a combination of both. This question

---

<sup>21</sup> This term is used to denote the presentation of these results within the CR framework guiding this study and, broadly, refers to those produced by quantitative analysis.

requires intensive exploration and will be addressed in the next chapter.

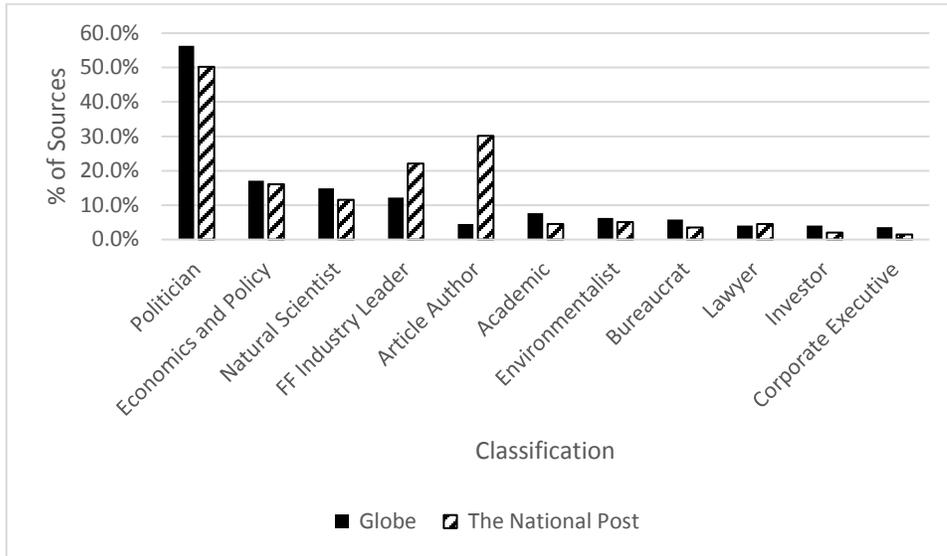
*Chart 3 – Thematic Frames*



The overwhelming majority of conservative think tank (CTT) articles are written using a policymaking thematic frame. C.D. Howe had 11 of the 12 articles framed within “policymaking,” and the 12<sup>th</sup> article was framed within “economics.” The Fraser results are similar to those of C.D. Howe. 29 of 37 articles are framed within “policymaking,” 6 in “economics,” and 1 each for the “ecological” and “science and technology” frames. These results are expected; as described in previous chapters, these institutes are policy and economic think tanks.

**4.2.2 Voices.** Frameworks of understanding constitute, and are constituted by, individual voices constructing narratives. Determining who authors rely on to ‘tell the story’ is as important as the story itself. Chart 4 displays politicians as the main sources of information in G&M and NP. In both newspapers, the positions and opinions of politicians regarding AGW far outmatched those of other groups. This group was present in 125 of 222 articles in G&M and in 100 of 199 articles in NP. Economic and policy specialists also featured prominently (38 articles in G&M; 32 articles NP), along with natural scientists (33 in G&M; 32 NP), and industry leaders (27 G&M; 44 NP). The high percentage of article authors as sources of information in NP reflects the number of commentaries (categorized in opinions) produced by the newspaper on the subject matter.

*Chart 4 – Journalistic source by profession*



The CTTs only produce op-ed's and therefore have an overwhelming majority of economics and policy specialists as voices in their articles.<sup>22</sup> C.D. Howe rarely utilizes sources and primarily relies on the author's opinion to guide the narrative. Fraser has a wider variety of voices than its counterpart; these include natural scientists (26 articles), fossil fuel industry leaders (6 articles), and politicians (5 articles). Fraser directly employs natural scientists to critique mainstream science and provide "sceptical" takes on the conclusions of the wider scientific community. Given this, the majority of scientific discussion, relatively speaking across all sources, occurs in Fraser.

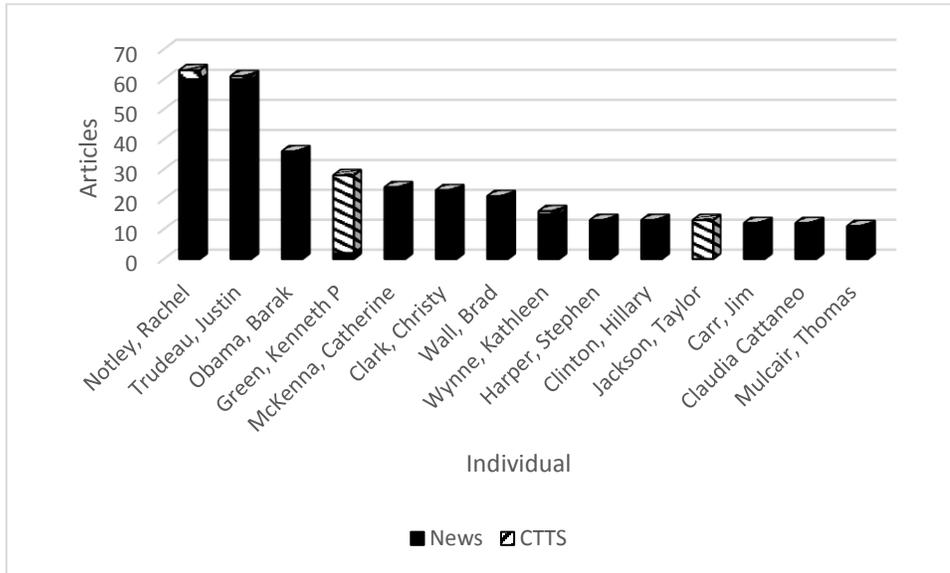
Individual politicians dominate the narrative of AGW discourse in the newspaper samples (Chart 5). Prime Minister Justin Trudeau and Premier Rachel Notley each appear in 60 articles between the two news sources. The specific form of referencing sources was captured during the coding process. Forms consisted of quotes, paraphrases, and policy documents tied to particular parties.<sup>23</sup> The 'voices' of PM Trudeau and PM Notley, and their respective governments, are primarily conveyed through quotes (48.5% and 45.9% respectively), either directly to the newspaper or (more often) through public statements; paraphrased statements constitute 29.2% of references from PM Trudeau and 25.7% from PM Notley; and policy documents constitute 22.4% and 28.4% respectively.

---

<sup>22</sup> Following the coding procedures outlined in previous chapter, all commentary, opinion, and op-ed articles capture the author as a 'voice' in the coding process. Both think tanks are policy-oriented institutes, employing economists and policy analysts; hence the majority of economic and policy specialists.

<sup>23</sup> This coding provides an added layer of detail when exploring the role of 'voices' in articles. Quotes, paraphrases, and policy documents may all convey the same message (or not) but hold different degrees of legitimacy in the public sphere. Further, this allows for comparisons between policy documents and quotes to determine consistency. Considerations of consistency were not conducted here but may be useful in the future.

*Chart 5 – Individual Voices*



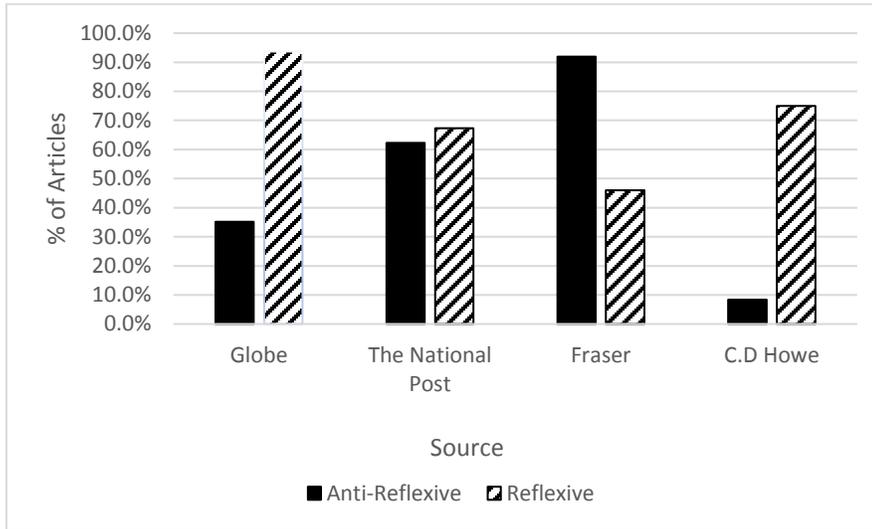
As mentioned above, voices in CTT articles are primarily those of the authors. Christopher Ragen authored 6 of 12 articles produced by C.D. Howe. The remaining 6 are authored by Benjamin Dachis – 4 of which are co-authored by Grant Bishop, Anindya Sen, and Robin Boadway (2). At Fraser, Kenneth Green authored 13 articles on his own and co-authored 12, Taylor Jackson was second author on 12 articles, Ben Eisen co-authored 8 articles, and Charles Lamman authored 1 article and co-authored 3. Kenneth Green wrote two articles in NP sample as well. This individual has a long history of climate change denial, and deep connections with other libertarian think tanks in the United States. Another notable denier, Ross McKittrick, co-authored one article (with Kenneth Green) in the Fraser sample and wrote 4 articles in the NP sample. Both individuals continually posit AR positions that are representative of AR tendencies. An exploration into their histories and writings provides insight into the relationship between a generative mechanism and the conditions influencing its manifestation. This will be discussed below in the intensive result section.

**4.2.3 Anti-reflexive and reflexive results.** The presence AR and RF claims varies across sources - notably with G&M and C.D. Howe on one side and NP and Fraser on the other (chart 6). Almost all G&M articles contain RF claims, but a sizable minority also contain AR. It should be noted that both claims often appear in the same article (regardless of newspaper) to provide greater context, give both sides of the argument, to setup a counter-argument, or all three. Only one source in C.D. Howe contains AR.

NP has slightly more RF than AR; however, NP has almost twice as many articles containing AR than G&M does. Fraser was the only source with a higher percentage of AR than RF. These demi-regularities pinpoint sources of AR in Canada and necessitate

further exploration to reveal transfactual conditions. The intensive section below provides examples of these claims, and the discussion chapter that follows elucidates their transfactual conditions.

*Chart 6 – Anti-Reflexive vs Reflexive Presence*

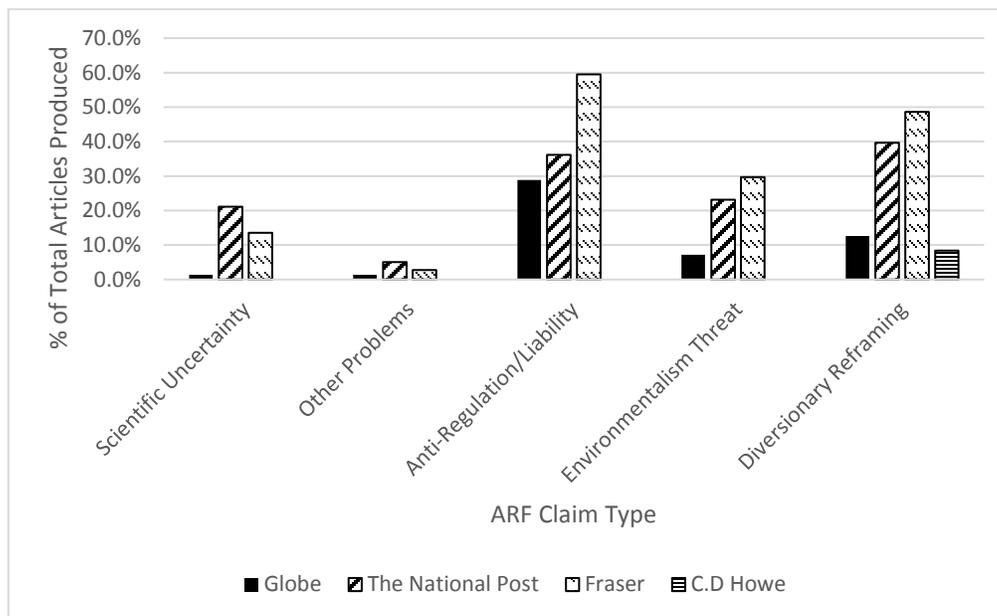


AR claims were broken down into the five listed in chart 7 below (and described in chapter two). Relative to other AR arguments, anti-regulation/anti-corporate liability is used in the greatest share of articles in every source except C.D. Howe. Diversionary reframing and environmentalism as a threat to social process claims are also prominent in NP and Fraser. Just over 20% of NP articles contain uncontested claims of scientific uncertainty, which is notable for a prominent national newspaper. Following the initial coding, sub-categories were abstracted from each of the five claims. This process was inductive, iterative, and only used for the subsequent intensive analysis. The purpose of this step is to provide greater depth to the analysis of AR.<sup>24</sup> These will also be covered, along with their authors, sources, and arguments in the intensive results section of this chapter.

---

<sup>24</sup> The results of this step are not included in the extensive results section primarily due to (1) their utilization as intensive (i.e., qualitative) results, and (2) the constraints posed by intercoder reliability. Achieving an acceptable level of intercoder reliability for the number of claims found was deemed beyond the limitations of this thesis.

*Chart 7 – Anti-Reflexivity as a % of Total Articles*



RF claims were grouped into four categories (chart 8); these were created specifically for this study to measure the relative weight of AR claims compared to others in the public discourse (described in chapter 3). Promoting regulation and corporate liability (labeled ‘regulation’ from here) appears prominently in all four sources but is used differently amongst them. G&M and C.D. Howe typically present this claim without an AR counter-argument. NP and Fraser use the claim in various ways, depending on the author.

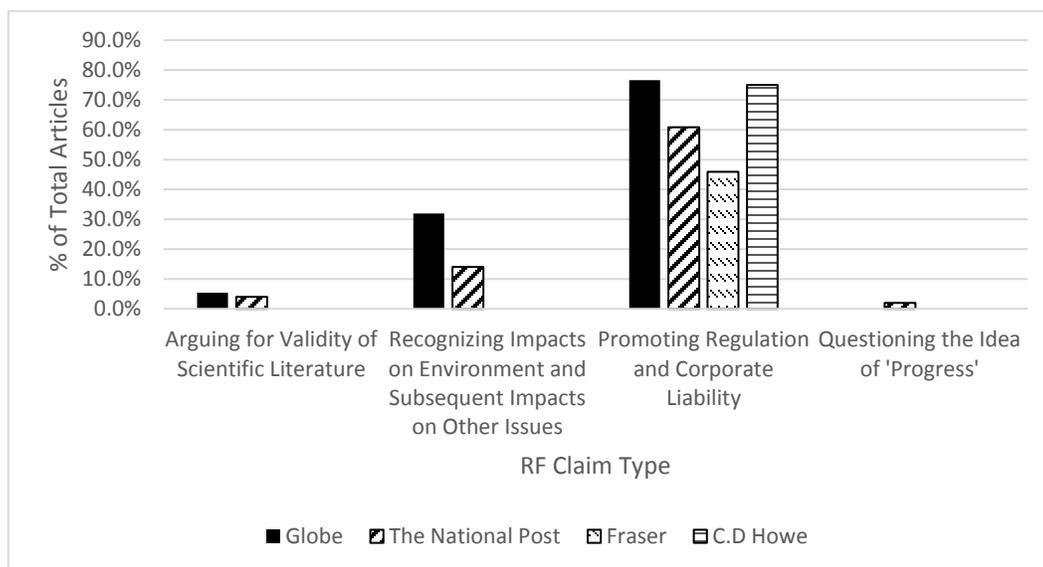
In NP, when regulation claims are championed, they refer exclusively to market mechanisms – as opposed to other forms of government involvement, such as stricter emission regulations or assessment. More often these claims (and the politicians connected to them) are discussed specifically for the purpose of providing a rebuttal.<sup>25</sup> Regulation claims in Fraser are almost solely used to describe the positions of others. Similar to NP, this usage is typically for the purpose of setting up a rebuttal.

Demi-regularities discovered in these extensive results highlight a predominance of policy-making frames, political voices, and a substantial presence of AR in NP and Fraser. These findings cannot, in and of themselves, be used to elucidate transfactual conditions of AR in Canada; however, they do provide direction for further examination later on in the project. The following section will describe the results of this process.

---

<sup>25</sup> These outlines were still captured as regulation in the coding process and are reflected here. This finding further illustrates the inherent limitations of quantitative results, necessitating further qualitative analysis.

*Chart 8 – Reflexivity as a % of Total Articles*



### 4.3 Intensive Results

While quantitative research reveals relations between objects (referred to here as demi-regularities), the nature of these relations can only be discerned through a combination of qualitative research and inferential reasoning. Considering the research questions, and the lack of literature regarding the Canadian context, a critical methodological pluralism is necessary here. Extensive results outlined above guide the qualitative research into AR discourse, institutions, and individuals. More specifically, qualitative research is used to explore causal mechanism-constituting transfactual conditions (Danermark et al., 2002).

This section describes the intensive research results. It begins by contextualizing the discourse of AGW in Canada through a brief outline of the main topics covered during this time. The role of RF in all four sources will be addressed, but to a limited extent to allow more space for AR. Following this, examples of AR claims are presented – these include the author(s), newspaper or CTT, and article type . This section ends with a brief outline of notable individuals and institutions.

**4.3.1 Topics and trends.** Exploring generative mechanisms and contingent conditions of AR discourse in news-media necessarily includes a description of popular topics and trends regarding AGW and energy use. An issue or topic – referred to as a ‘news-hook’ in the literature (Young & Dugas, 2011) - is the core subject of an article that provides the basis for its publication (e.g., COP21). Narratives revolve around news-hooks and construct a reality of interpretation using frames and claims. Hooks are fundamental for the analysis of generative mechanism and, especially, conditions of AR discourse. The following section provides a brief outline of the predominant news-hooks in the data sample.

Newspaper articles primarily discuss the politics of climate change and Canadian energy. Rachel Notley and the NDP (who had just won a surprise victory Alberta) are covered throughout. Topics include the Alberta climate change panel, the NDP budget, changes to the gas and oil royalty framework, the creation and announcement of the NDP “carbon plan,” and the fossil fuel industry’s response to these issues. The study period also overlapped with the Canadian federal election. Election coverage primarily discusses the victory and plans of PM-designate Trudeau and his Liberal Party. Articles covering the new federal government largely outline their positions on various AGW and energy issues, Cop21, and plans, arrangements, and conflict amongst premiers in developing a “Pan Canadian Framework.”

Tensions between environmentalists and the fossil fuel industry, and between the leaders of different provinces, over proposed pipelines (Keystone XL, Trans-Mountain, Energy East) are covered in detail. Keystone XL (KXL) receives the greatest amount of coverage in both newspapers. The province of British Columbia (BC) receives considerable coverage in G&M regarding plans to construct a liquified natural gas plant. Ontario’s “Government Action Plan” is announced at the end of the study period but also received a fair amount of speculation prior to its release (partly due to leaked documents).

AGW discourse in G&M revolves around the positions and opinions of politicians and political parties. Primary topics overwhelmingly consist of policy plans and energy concerns. Individual sources used by authors to comment on stories implicitly, and sometimes explicitly, recognize the problem of AGW and the need to reduce emissions.

Solutions put forth tend to favor market mechanisms, as opposed to intentional and concentrated government action in the economy.

Arguments in NP range from “market mechanisms” positions (taken in G&M and C.D. Howe) to outright denials of AGW. Articles in the news section are written by a wide variety of authors and primarily remain objective, in the journalistic sense. The financial section is less objective than the news, but not as explicitly subjective as the issues and ideas and comment sections. NP produced a far higher percentage of opinion pieces than G&M (36% compared to 5.4%). Columnists tend to write articles that are highly critical of RF positions taken by politicians and environmentalists. These sections (grouped together and referred to as comments moving forward) contain the greatest number, and widest variety of AR claims across all sections in both newspaper samples. A small number of nationally recognized and prominent authors, such as Rex Murphy, Peter Foster, Terrence Corcoran, and Lawrence Solomon, are responsible for 46% of NP’s commentary articles. These individuals typically espouse AR claims, many of which are documented in the intensive results below.

C.D. Howe primarily discusses the Alberta Royalty Review, carbon pricing and the Ontario Climate Change Action Plan. Rather than substantial government intervention, they recommend market mechanisms, such as carbon pricing and cap-and-trade. AGW science receives no mention, neither to confirm or deny it, but their positivity toward market mechanisms curbing emissions clearly implies an acceptance of the problem. Because the primary objective of this thesis is to explore AR discourse, and C.D. Howe abstains from it, the institute is only discussed briefly in this section of the study.

Fraser articles discuss most of the subjects covered by G&M and NP. Primary topics of interest include the Alberta Climate Leadership Plan, the ON Climate Change Action Plan, and KXL. Fraser articles are highly critical of most government actions aimed at reducing, restricting or taxing the fossil fuel industry. Their anti-regulation position is often paired with other strategies listed in the AR literature such as diversionary reframing and labelling environmentalism as a threat to the economy and development. Scientific uncertainty exists, but not to the extent present in NP articles.

**4.3.2 Reflexivity.** G&M and C.D. Howe contain the most RF claims. These primarily promote regulation. Plans and policies to address AGW and energy issues in Canada dominate the discourse. In G&M specifically, these included the Alberta Climate Leadership Plan, the Paris Accord, and the Pan-Canadian Framework. Calls to action from various individuals and groups are also prominent in G&M. C.D. Howe articles focus primarily on regulation through market mechanisms. Their articles tend to detail various approaches, comparing them to each other and to other non-market-based approaches, such as government subsidies for clean energy and strict regulations on new building projects.

The need for regulation in G&M articles is often buttressed through a consideration of the environmental and economic impacts of AGW. Concerns regarding these impacts are expressed by various politicians, environmentalists, business owners, and insurance companies. Promotion of regulation is also present in NP. The more objective sections – News and Financial Post – cite the same sources as G&M and contain most of the RF claims. While the comment sections of NP do contain a considerable amount of regulation claims, they are often cited for the purpose of setting up a critique or rebuttal.

Arguments for the validity of science are minimal in all sources, with only one article dedicated to addressing climate denial in G&M. Neither C.D. Howe or Fraser contain the claim. It is present in NP, but (again) mostly in the comments section, and typically for the sole purpose of providing a rebuttal.

These results are interesting, and their elucidation would be fruitful; however, it is beyond the scope of this work to explore them further. The primary focus here is AR. Therefore, the rest of this chapter delineates the intensive results concerning AR.

### **4.3.3 Anti-reflexivity.**

*Globe and Mail*. AR exists in G&M, though not to the same extent as NP and Fraser. AR claims in G&M primarily refer to specific government interventions that the authors or their sources oppose. PM Notley's decision to raise royalty rate, for example, received criticism. Pipelines feature prominently in these discussions. Oil industry representatives, conservative politicians in Canada, and Republican politicians in the U.S. criticize opponents of pipelines and those calling for improved assessment procedures (for example, the inclusion of upstream and downstream emissions).

Diversionsary reframing appeared in 41 G&M articles. This specific form of AR is often used to buttress opposition to government intervention (a prominent trend found throughout the entire data set). Narrow framing – that is discussing issues without the necessary context required to fully understand opponents concerns, potential risks, or ramifications - is a prominent sub-tactic of diversionsary reframing in G&M. For example, it is argued that the rejection of KXL will lead to more rail cars, increasing the risk of spills and producing more GHG emissions during transportation. BC's LNG plant is also subject to narrow framing. PM Clark and supporters of the project argue that it

would ultimately offset coal-use in China, bringing down emissions in the process. Finally, climate concerns are portrayed by some journalistic sources as proxies for other (often nefarious) concerns such as politics, rather than as legitimate motivations to reduce emissions.

*National Post and Fraser Institute.* NP and Fraser articles contain a mix of scientific uncertainty (21.1% NP; 13.5% Fraser), anti-regulation/corporate liability (36.2% NP; 59.5% Fraser), environmentalism as a threat to social progress (23.1% NP; 29.7% Fraser), diversionary reframing (39.7% NP; 48.6% Fraser), and prioritizing other problems (5.0% NP; 2.7% Fraser). In NP, nearly 50% of AR claims are in an article written by one of four authors: Claudia Cattaneo, Peter Foster, Terrence Cocoran, and Rex Murphy. Claudia Cattaneo's articles contain a mix of anti-regulation and diversionary reframing. The other three authors penned articles containing a broader mix of AR claims.

The following section presents examples of AR claims that have been drawn from the data. These quotes are representative of their respective claims, but do not necessary capture their full range. The purpose here is to provide intensive depth that, when combined with structural analysis, reveals the transfactual conditions of AR specific to Canada.

*Anti-Regulation, anti-corporate liability.* Anti-corporate liability is rarely discussed, but anti-regulation is prominent in both NP and Fraser. Anti-regulation claims often attack the positions and policies of governments, proposing that government meddling in the economy creates uncertainty for business and investors, ultimately leading to business flight (i.e., leaving the province or country) or choosing not to invest in the first

place. For example, Yadullah Hussain quotes Mark Scholz, president of the Canadian Association of Oilwell Drilling Contractors, as saying:

Scholz said he has also noticed a shift in oil drillers' focus amid "bad public policy" in Alberta in the form of tax hikes and new policies related to climate change. "We are seeing both small private and large public companies starting to divest out of Canada," Scholz said. "From a business perspective there are many things that are not boding well for the Canadian market." (NP, Hussain, 151231- Financial Post).

It is argued that these actions ultimately hurt the economy and cost individuals their jobs. Regulation and government intervention are also considered a waste of tax payer money. Buttressing this position are proclamations that governments are incapable, or simply too inept, to manage the economy:

The main problem with the left-liberal mavens of innovation is that they are congenitally incapable of grasping that government promoted innovation (except perhaps in defence) is doomed to fail. Thus one shouldn't draw any lessons from Bombardier or RIM, or Nortel or Ballard, or the perennial ineptitude of RD programs. All that's needed is more innovation in innovation policy: new ways to justify old forms of intervention. (NP, Foster, 151104A - Comment)

The Ontario Liberal government possesses no credibility, whatsoever, on the energy file. One statement alone from the province's auditor general is enough to establish that proposition. Under its green impulses, the government has mangled the market, and cost Ontarians "an overpayment of \$37 billion between 2006 and 2014." And is expected to reach an overcost of \$133 billion by 2032. (NP, Rex Murphy, 160521 - Comment)

The sentiment is common in Fraser. Kenneth Green and Ben Eisen write:

But Ontario's government is apparently unwilling to abide by the central economic theory behind carbon pricing and seems determined to press ahead with intrusive economic interventions. Ontario will wind up with higher taxes and more regulation and more distortive subsidies, a dangerous combination for the provincial economy. (Fraser, Green & Eisen, 160531 – Think Tank)

This line of argument provides support for the rejection of regulations. The federal leadership's decision to consider reforming the National Energy Board's (NEB) review process (primarily regarding pipelines) draws the ire of policy critics in NP and Fraser.

In an article arguing that NEB reviews have become more political than objective, Claudia Cattaneo states that “Justin Trudeau has taken a dysfunctional pipeline regulatory system and made it not merely worse, but a potentially impregnable barrier.” (NP, 160213). In discussing BC regulations Kenneth Green and Taylor Jackson write:

It’s not only pipelines that will be subjected to climate change tests, so too will LNG terminals. British Columbia’s LNG industry has already been hampered by costly regulatory delays, which may result in the province forgoing export revenues of C\$22.5 billion per year in 2020, rising to C\$24.8 billion per year in 2025 if the industry does not get off the ground. The new regulatory requirements may only further the delays. (Fraser, Green & Jackson, 160102 – Think Tank)

Weaving anti-regulation claims with diversionary reframing (specifically environmental concerns as a proxy for political maneuvering), Rex Murphy claims:

So all the talk about revised National Energy Board (NEB) guidelines may reasonably be seen as a kind of political hat trick designed to give the illusion that these pipelines have a hope of ever being approved. Deep down, however, the lines are drawn and the real position has already been declared. It follows U.S. President Barack Obama's pattern of doing exactly the same thing. After seven or eight years and multiple studies that all advocated for the approval of the Keystone XL pipeline, Obama, on the very eve of the Paris summit, announced he was turning down the project. (NP, Murphy, 160208 – Opinion)

***Diversionary reframing (Reframing).*** Reframing is prominent in both NP and Fraser.

The specific sub-tactic - labeling climate concerns as proxies – is overwhelmingly used.

President Obama’s decision is often portrayed as solely driven by politics, and devoid of any objective consideration. This line of reasoning was submitted formally in a filing

request for arbitration under the North American Free Trade Agreement (NAFTA) by

TransCanada. Portions of that document were quoted in NP and Fraser:

In the 42-page document, TransCanada claims the U.S. government "ultimately denied Keystone's application, not because of any concerns over the merits of the pipeline, but because President Obama wanted to prove his administration's environmental credentials to a vocal activist constituency that asserted that the

pipeline would lead to increased production and consumption of crude oil and, therefore, significantly increased greenhouse gas ("GHG") emissions." (NP, Cattaneo, 160625A – Financial Post)

PM Trudeau receives a similar treatment in NP for his tanker ban off the coast of BC (NP, Cattaneo, 160112); and his stated goal of becoming a “green leader” is considered by Rex Murphy as emanating from a desire to gain the “outside world’s self esteem” including that of the “Leonardo DiCaprios, the Neil Youngs, and the Bonos of the world.” (NP, Murphy, 160208). These attacks are tied to arguments that increased regulation, reduced emissions, and government promotion, or subsidies of clean energy sources, represent “power grabs.” Gatean Caron, the former chair of the National Energy Board, is quoted as saying:

"Imagine the scene - the federal government saying 'The provinces are doing what they can, we don't think it's enough, so when we look at pipelines, which is a means for provinces to transport what under the Constitution they have the power to develop, we are going to choke the oil flowing through these pipelines so we can reach our Paris commitments,' " Caron said. "If it is not a federal intrusion of provincial powers, if it is not also doing policy through the backdoor, what is it?" (NP, Cattaneo, 160213 – Financial Post).

Red-scare tactics are another form of diversionary reframing that posits concerns are proxies. For instance, political parties holding expressing RF positions are labeled “the green state,” and are accused of attempting “communist style” power grabs.

The new objective of the green state is to manage carbon emissions down. Growth, they say, will come if governments plow the carbon tax cash back into government-planned green development to encourage low-carbon growth. That means government controls the nature of the growth, the technology developed, the future of the energy, the future of the economy. (NP, Corcoran, 160225A - Comment)

There will be new mandates and subsidies for biofuels, electric buses for schools, extensive new bike lanes to accommodate all those bicycles Ontario commuters will be riding all winter, mandatory electric recharging stations on all new buildings, and many other Soviet-style command-and control directives. The scheme is called the

Climate Change Action Plan, or CCAP, but it would be more appropriately called the Climate Change Coercion Plan: the CCCP. (NP, McKintrick, 160518 - Comment)

Aligning with arguments of “power grabs” and “red scares” is that of a “climate change industry.” For instance, Terence Corcoran ends his piece titled, “*economic dangers of Paris*” by stating that “(G)reen activists and others on the left may temporarily welcome corporations as their comrades-in-arms, but the rest of us should be wary.” (NP, Corcoran, 151215B - Comment). These claims are mostly written by Peter Foster and focus on the actions of environmental non-government organizations (ENGOS) pressuring politicians and providing information to the public. In one article he insists that the “hydra-headed environmental NGO’s back by U.S. Foundations” are “placarding and misinforming in spades” and they “arguably hijacked the political process north of the border to a similar degree” (NP, Foster, 150828 - Comment). A prominent charity, The Pierre Elliot Trudeau Foundation, is noted in another article by Peter Foster where he states that:

Trudeau’s chief adviser is Gerald Butts. A former head of the World Wildlife Fund Canada. Meanwhile another major influence will be the Trudeau Foundation, a left-liberal sleeper cell set up with \$125 million of taxpayers money. Last year the foundation held a climate conference in which the main speakers were radical activists such as Tzeporah Berman and policy wonks such as Chris Ragan, head of the Ecofiscal Commission. Butts worked with the McGuinty Liberals whose radical - and expensive - anti-oil green policies are still being eagerly pursued by Kathleen Wynne, who is reportedly close to Trudeau. Just to complete the circle, one of Wynne's close advisers is Ed Clark, the retired head of the TD Bank. Clark was one of the main bureaucratic architects of the National Energy Program. (NP, Foster, 151021A - Comment)

These “left-liberal sleeper cells” are also referred to as “big money environmentalism” (NP, Selley, 151113A - Opinion). Other groups based in the U.S such as 350.org are accused of “blatant interference...deploying deplorable tactics to

influence choices that are Canada's to make.” (NP, Cattaneo, 151107C - Column). The credibility of Alberta-based Pembina Institute and the Mowat Centre are questioned in an article discussing the Ontario Energy Board’s unfavourable assessment of the Energy East Pipeline. Peter Foster claims:

It commissioned a climate report, but when "Ontarians" decided the report was too soft, the OEB was quick to cite another highly negative 2014 report by Pembina. The OEB also commissioned a report from the Mowat Centre at the University of Toronto, which was obviously tasked with downplaying three positive cost-benefit analyses of Energy East. (NP, Foster, 150828 - Comment)

Reframing also included statements asserting the futility of trying to reduce emissions. Particularly prominent in this form of narrow framing are assertions of Canada’s miniscule share of global emissions:

It is true that Alberta generates greenhouse gas emissions and global greenhouse gas emissions contribute to climate change. But the key word is global. Canada’s greenhouse gas emissions account for 1.6% of the global total, and the oil sands represent about eight per cent of that, or about one-tenth of one percent of global emissions. As Faith Birol (sic), Chief Economist at the International Energy Agency observes, even if Canada increased production by 150 per cent over the next 25 years, “...the emissions of this additional production is equal to only 23 hours of emissions of China — not even one day.” (Fraser- Green & McKittrick, 150708 – Think Tank)

This is a complex issue but we need to remember just a few easy-to-grasp numbers. According to a voluminous report this week from the Montreal Economic Institute (MEI), Canada is responsible for 1.59 per cent of man-made greenhouse gas emissions. Thus nothing Canada can do - up to and including closing down the entire economy - would have any impact. (NP, Foster, 151113B - Comment).

Premier Wall of Saskatchewan makes the same argument (from the Paris Conference) but adds a comparison to China’s coal production when he says that:

he [is] not as ardent about the climate change crusade as most of the others around the Canadian leadership table. "Probably not. That's why I have to be forceful - I need to be able to say that if Canada eliminated all its emissions, it's just 2 per cent of global emissions, when 1,000 coal plants are on the books." (NP, Ivison, 151201B - News)

In an article titled “Alberta’s crippling carbon tax,” Paige Macpherson writes:

Canada contributes 1.65 per cent of global greenhouse gas emissions - nothing compared to big emitters China and the U.S. - according to recently released World Resources Institute data for 2012... Using the predictions in Alberta's climate report, under a carbon tax we'll increase our emissions by 1.1 per cent (from 2013 levels) by 2030. So after 13 years of the carbon tax, we'll have increased global emissions by 0.007 per cent, versus an increase of one tenth of a percent if we had no carbon tax. That's it. It's like arguing whether you should use a shot glass or an eye-dropper to fill a swimming pool. Either way we'll have done virtually nothing to reduce global climate change. But a carbon tax will have certainly made Albertans poorer. In the best-case scenario, after 13 years of Albertans each paying thousands in carbon taxes, we'll kick out 50 megatonnes less than we would otherwise. Meanwhile, China will increase world emissions by 58 times that amount in that same period. (NP, Macpherson, 151203 - Comment)

Articles in both NP and Fraser contain claims that climate treaties, like the Paris Accord are bound to fail and that the problem of reducing emissions is insurmountable. The failure of the Kyoto Protocol is exemplified as proof of this position and differences between countries are held up:

Since I wrote that study, of course, we've seen the failure of the United Nations Kyoto protocol process over and over again. The problem is that the laser focus on mitigation means success will be stupendously expensive, and, because the UN's favoured approach would require massive wealth transfers, it would also be wildly unpopular. (Fraser, Green, 160608 – Think Tank)

Mark Cameron and Tom Chervinsky compared the propositions in the Leap Manifesto to a belief in unicorns (NP, Cameron & Chervinsky, 150922 - Opinion), and Rex Murphy opines that Premier Wynne's government "possesses no credibility, whatsoever on the energy file" and that "plans for the "transformation of the Ontario energy industry," is of a reach and scope, depth and range that defies all comparison" (NP, Murphy, 160521 - Letters).

Narrow framing is utilized in the pipeline debate. Many argue that oil sands will either be transported one way or another, by pipeline or by rail, to the U.S. and that the former is the obvious choice considering the safety concerns of rail transport and their

emissions. This strategy is used most often in Fraser to undermine the position of pipeline opposition:

Indeed, the Canadian Association of Petroleum Producers projects that rail movements of oil will increase from 185,000 barrels per day in 2014 to between 500,000 and 600,000 barrels per day by 2018. The increase in transporting oil and gas by rail in the absence of pipelines poses unnecessary risk to Canadians, since on a comparative basis pipelines experience fewer incidents. (Fraser – Green, & Jackson, 150724 – Think Tank)

However, the lack of pipelines bottlenecks production; significantly more oil can be transported via pipeline than rail. Increasing the number of pipelines allows for increased exploitation of oil sands, and therefore, more fossil fuels being burnt (both during increased exploitation, and subsequent use of the product in Canada or the U.S). Narrow framing also manipulates numbers and statistics to support pro-pipeline positions. In an article promoting the need for pipelines, Chris Bloomer (President and CEO of the Canadian Energy Pipeline Association) writes:

These companies transport 1.2 billion barrels of oil and almost three trillion cubic feet of natural gas per year with a 99.999-per-cent safety record. In 2015, Canada's mainline transmission system had zero significant incidents. That's why pipelines are recognized as the safest way to transport energy and why new transmission pipelines will also be safe. (GM, Bloomer, 160227 - Business).

***Environmentalism as a threat to social progress.*** This claim exists throughout NP and Fraser. As mentioned above in the section discussing anti-regulation, government policies to reduce emissions are often portrayed as a threat to the economy and development:

In the context of anti-growth policies that have already been implemented, this week's carbon tax announcement should be viewed as yet another blow to Alberta's investment climate and another nail in the coffin of Alberta's tax advantage. (Fraser, Eisen, & Lamman, 151123 – Think Tank)

The Paris text several times stresses the critical importance of cities and non-governmental organizations in promoting the climate agenda. Thus, to the extent that Canadian export pipelines are being opposed by local authorities in Vancouver and Montreal, and challenged legally and illegally by the likes of Greenpeace and ForestEthics, the UN's agenda isn't just bureaucratic fantasy. It's a real threat to prosperity and democracy. (NP, Foster, 151007 – Financial Post)

Attacking a report written by Policy Horizons Canada (a government agency) called “Canada in a Changing Global Energy Landscape,” Kenneth Green comments that “it reads more like environmentalist wishful thinking than as a serious effort to really evaluate risks to Canada’s future.” He goes on to label the report as “dangerous” and concludes this article by saying:

The risks of believing in fairytale high-speed change is in not realizing the kind of economic wreckage that can ensue by trying to rapidly rebuild the energy systems that are the key source of our prosperity; that keep the lights on and planes flying, and that give us a quality of life that is the envy of much of the world. (Fraser, Green, 160601A – Think Tank)

Discussing President Obama’s decision to reject the KXL pipeline Claudia Cattaneo states that “the denial is also a wake-up call to all Canadians. In turning down KXL, Obama stood side-by-side with environmental activists who want to shut down a big part of Canada's energy economy” (NP, Cattaneo, 151107C - Column). In the article, she paraphrases Brenda Kenny – President and CEO of the Canadian Energy Pipeline Association – speaking on what needs to be done in order to get pipelines built:

Incorporate serious consultation and accommodation with First Nations by the government, instead of relying on pipeline companies to do it; come out of the Paris climate change summit with clear policies so that pipeline reviews aren't paralyzed by climate change advocacy; and get back to reviewing pipelines based on the national interest. (NP, Cattaneo, 151107C - Column).

Discussing jobs specifically, Kenneth Green and Taylor Jackson criticize the actions of premiers:

In this new report, the premiers play up the energy sector, while promoting policies that will cripple it. They laud the industry that directly contributes 10 per cent of Canada's GDP and directly and indirectly employs more than 900,000 Canadians, making it one of Canada's most important industries, but they then accept politically-derived climate change goals that would require most of that industry to stop growth in only a few years if the targets are to be reached. (Fraser, Green & Jackson, 150724 – Think Tank)

In an article covering PM Wall's rigid opposition to any action that effects the energy industry, Rex Murphy builds on the PM's disdain for the idea of "social licence" saying:

Premier Wall had the nerve to allude to the new and trendy concept of "social licence." He didn't add, but he very well could have, that there was no talk of "social licence" when it came to getting jobs in the oil industry, or contracts with companies outside the west, or working with university science and engineering programs, or contributing to the national economy during the most turbulent economic period in a generation. (NP, Murphy, 150718B - Opinion)

Examples of job loss, and the very real threat of the trend continuing are outlined and commented upon:

"You know the delays we've experienced with Keystone and some of the pushback we're experiencing with Energy East, and I would say that in North America in general, companies are facing pushback primarily from activists - not exclusive to but primarily from - activists that want to see fossil fuels kept in the ground." TransCanada has 6,000 employees - about 4,000 in Canada. Its first phase of staff cuts came in June, when the company laid off 185 people from its major projects division. (GM, Cryderman, 150925 - News)

Peter Foster drives this point home in an article titled "Climate Policy Refugees." He argues that the environmentalists are driven by a personal vendetta against PM Harper he labels "Harper derangement syndrome." This he states:

Lies at the bottom of rabid opposition to further development of the oilsands and pipelines, the proliferation of subsidies for unreliable wind and solar energy, and a hodgepodge of plans to curb emissions via regulation, taxes or trading systems. All mean lost jobs and reduced GDP. Only Stephen Harper has dared to point this out, and has been roundly abused for doing so. (NP, Foster, 150911 - Comment)

These concerns naturally tie into development issues in other, poorer, countries. For example, Raymond J. De Souza connects progress through fossil fuels, environmentalism as a threat to social progress, and the futility of the insurmountable when he opines:

As billions of poor people have ceased being destitute these past decades, and hope for continued development, their demands for energy increase. So either the rich countries will have cut back significantly on fossil fuels, the poor countries will have to remain poor or by some combination of technological advancement and staggering state subsidies, renewable energy will have to replace fossil fuels. (NP, De Souza, 150707 - Opinion)

Elements of the “dominant social paradigm (DSP)” are in this sub-category as well. The idea of continual human progress through increased reliance on a capitalist driven economic social structure leans heavily on cheap and abundant energy. Over the short term, fossil fuels are the cheapest, most abundant source of fuel available, and they have brought great amounts of wealth and “progress” to many countries. This is used to buttress DSP arguments in NP:

"There is a growing sense of frustration in the West that our economies have been creating significant opportunities for all Canadians" is one of those statements. It carries the clear implication that since this is so - the Western oil industry has helped all Canadians - it is a little more than curious there is so little encouragement or support for that industry. Indeed, it's rather the opposite. Any opportunity to hobble it, or to put it in harness to an environmental agenda, is leaped at by some. In this contest 2050 always wins over 2015. (NP, Murphy, 150718B – Opinion)

Equally important, contrary to warmists' claims, since fossil fuels helped start the Industrial Revolution in the mid-18th century and CO2 emissions skyrocketed, so have aggregate indicators of human well-being. Data back to 1750 show the dramatic escalation in measures of well-being and, as the nearby graph shows, the bulk of the increase has occurred since 1900 as global carbon-based industrial development soared...Average life expectancy, probably the single best indicator of human wellbeing, has more than doubled from 26 years in 1750 to 31 in 1900 and to 71 years in 2013. (NP, Goklany, 151013 - Comment).

This line of reasoning was heavily relied upon for those asserting that the best way to deal with threats associated with AGW is to accelerate fossil fuel exploitation and “grow out” of the problem. Youri Chassin presents this argument in an article titled “Fight Climate Change Efficiently” stating:

Thankfully, since the 1920s, the world has gotten a lot richer, and the global mortality rate from extreme weather events has fallen by 98 per cent. Clearly, human vulnerability is less due to climate than to economic conditions. The economic growth that raises living standards allows us to better adapt to climate change. (NP, Chassin, 151117 - Comment)

Oil itself is also labelled the “unsung hero of Fort Mac” in an article named as such, Kevin Libin argues that forest fires have always posed a threat to human beings, and oil is what allowed the population of Fort Mac to escape certain doom. He reifies oil and asks that we “all take a moment now to thank our lucky stars for ... oil” (NP, Libin, 160506B - Comment). He goes on to say that: “without oil, those who lived there today would be poorer, too. They would also be, largely, sitting ducks in the path of an out-of-control forest fire,” and “anyone who made it out of Fort Mac in time will tell you, whether you and your family survive the next fire - or any other natural disaster - depends on whether you have petroleum products or not” (NP, Libin, 160506B - Comment). He concludes his article:

But no real scientist believes that wildfires can be completely prevented. Forests around Canadian townsites are already dangerously old and tindery, since they're no longer allowed to regenerate through regular burning...the only thing we can control is how prepared we are to escape them when they come. All the wind turbines and solar panels in the world won't help rescue 88,000 people from a rapidly spreading inferno. For a miracle like that, we can only count on oil. (NP, Libin, 160506B - Comment)

*Assertion of scientific uncertainty (Uncertainty).* Similar to other AR claims, uncertainty claims are used in a variety of ways. Buzzwords and labels - such as

alarmists, warmests, climate zealots who are acting hysterical, and eco terrorists - are often used to undermine scientists, environmentalists, and politicians:

"Kathleen Wynne has this week been hosting a climate summit with California's governor Jerry Brown and Al Gore, both high cardinals in the zealous Church of Global Warming (Mr. Gore used to be Pope of that church, but the real Pope is now its Pope too), bringing a wonderful touch of pure Americana into Ontario politics" (NP, De Souza, 150714 – Opinion)

Scientific literature is misconstrued or outright denied. Indur M. Goklany – whose short bio at the end of the article states that he is “an independent scholar and author, was a member of the U.S. delegation that established the IPCC and helped develop its First Assessment Report [who] subsequently served as a U.S. delegate to the IPCC, and an IPCC reviewer” - writes the most detailed version of this claim in the data. He argues that “(N)o compelling case has been made that the net impacts of climate change will be negative by the end of this century, particularly given the gradual rate of warming observed recently” (NP, Goklany, 151013 - Comment). He defends this position writing:

The wide divergence between dystopian warmist claims and empirical reality can be attributed to the fact that those claims derive largely from unvalidated models. Empirical data, however, indicate that these models have overestimated the rate of warming. A recent study compared projections from 117 simulations using 37 models versus empirical surface temperature data. It found that the vast majority of the simulations/models have overestimated warming, on average by a factor of two for 1993-2012 and a factor of four for 1998-2012. It also estimated that the observed trend for 1998-2012 was marginally positive, but not statistically significant; that is, notwithstanding model results, warming has essentially halted. Impact models, likewise, have underestimated direct benefits of CO<sub>2</sub>, overestimated the harms from climate change, and underestimated human capacity to adapt which enables the benefits to be captured even as it also reduces the harms. Consequently, these models overestimate net negative damages. Not surprisingly, dire prognostications of increasing death, disease, and decline of human and environmental well-being from global warming are not reflected in the empirical data. (NP, Goklany, 151013 - Comment)

This same argument was presented a month earlier in a Fraser article by Kenneth Green:

An adult conversation would also acknowledge that the UN's climate models virtually all overstate predicted warming, and the more likely result of continuing to emit greenhouse gases is a moderate warming that can be managed with a variety of policies that are far less draconian than shutting off the fossil-fuel tap. As McKittrick observes: The most recent report of the Intergovernmental Panel on Climate Change said that observed warming this century was slower than predicted by 111 out of 114 of their climate model simulations. On average the observed warming this century was only a quarter what their models projected. (Fraser, Green, 150910 – Think Tank)

Conrad Black wrote an angry response to the famous U.S. climate scientist Michael Mann where he started with calling him a “discredited harpy of the now almost defunct global warming movement” (NP, Black, 150926 - Opinion). He went on to say:

The "hockey stick," the most important graphic in the entire climate debate, held that the world's average temperature proceeded along for centuries in a straight line like the shaft of a hockey stick lying flat, but had begun a sharp 45-degree climb like the up-raised blade of the stick. Of course, as I will show, this theory has been exposed as complete bunk, and while extreme environmental vigilance and ever greater research are called for, the demand for a savage reduction of all aspects of the use of carbon-derived energy has been abandoned by all but the eco-Janissaries who went too far out on the limb to come back, in the disorderly retreat from global warming to climate change. The world's average temperature has risen one centigrade degree in eighty years, the last 20 years of which is described by the eco-terrorists as "a pause." But Mann, who built a world-wide cult of personality and scientific eminence on his hockey stick, has become a laughingstock.” (NP, Black, 150926 – Opinion)

Misrepresentation of science and of scientist claims is more common than its outright rejection. This finds its way into the business section of G&M as well. Gwyn Morgan, who serves on the board of Encana Corporation (a massive fossil fuel corporation) and on the Fraser board of trustees, writes:

According to the most recent report by the Intergovernmental Panel on Climate Change (IPCC), Mother Earth warmed by just six one-hundredths of a percentage point between 1998 and 2013, only one-third of the amount predicted by IPCC's computer models. That's the lowest warming rate in half a century, even as

atmospheric CO2 concentrations increased by the highest rate ever. (GM, Morgan, 151215 - Business)

Peter Foster, in discussing the work-in-progress (at the time) Cop21 document, states that:

The document is a compendium of parentheses, that is, wording or issues that have yet to be decided. One parenthesis suggests that the famous 2 degrees Celsius rise in global temperatures (since before the Industrial Revolution) that will put us at an existential tipping point might be changed to 1.5 degrees Celsius. Could that be a recognition of the inconvenient fact that global temperatures are refusing to rise despite unprecedented increases in the CO2 that is meant to drive them? (NP, Foster, 151007 – Financial Post)

Jen Gerson wrote a scathing article criticizing those who partook in KXL's rejection. As part of the narrative she contends that prominent AGW scientist James Hanson:

...wrote an op-ed for The New York Times slandering Keystone as the posterchild for an apocalyptic vision of climate change to come. "If Canada proceeds, and we do nothing, it will be game over for the climate," he wrote. He later testified to a congressional committee that his writing had been misinterpreted, but the damage was done. (NP, Gerson, 151107B – Financial Post)

The “misinterpretation” is narrowly framed to appear as though James Hanson had reversed his positions on emissions – he had not. Narrowly framing the science, Youri Chassin writes:

...contrary to what many seem to believe, the mainstream of scientific opinion, as represented by the IPCC itself, is not an alarmist position...It should not be assumed, for starters, that fighting climate change will stop all undesirable weather phenomena. For example, according to the IPCC's Fifth Assessment Report, studies on extreme hurricane winds in the United States and the Caribbean, on tornadoes in the United States, and on storm winds in Europe have failed to establish a link with anthropogenic climate change. (NP, Chassin, 151117 - Comment)

In buttressing an argument of anti-regulation, Ross McKittrick paraphrases a section of the Intergovernmental Panel on Climate Change 4<sup>th</sup> report and leaves out key details that would provide the necessary context for an accurate interpretation. He writes:

Chapter 10 of the IPCC Working Group II report concludes that at low levels of warming (up to two degrees Celsius) the costs will be small relative to the impacts of other economic changes in peoples' lives, and may well be negative (i.e., a possible net benefit from mild warming). After tallying up the projected effects of warming and the likely economic impacts, and placing them in the context of all the other social changes that are expected in the years ahead, it concludes, in Chapter 10, "For most economic sectors, the impact of climate change will be small relative to the impacts of other drivers (medium evidence, high agreement)." In Figure 10-1 it shows that modest warming is as likely to be a net benefit as a net cost. And in the Working Group I report, the IPCC marshals evidence that warming has been proceeding at a lower rate than expected so far this century. (NP, McKittrick, 160518 - Comment)

Uncertainty amongst scientists (i.e., manufactured uncertainty) is woven into misinterpretations of science:

There has been a hiatus in measured planetary warming since the late 1990s. There is scientific disagreement about what this means. There is also legitimate debate about the accuracy of predictive models. The minority of dissenting science should be explored and addressed, not dismissed and vilified. It's not theology and contrarians are not heretics. (NP, Den Tandt, 151130A - Comment)

Perhaps it is the predictions that worry the world leaders. Here, we are often told by journalists that the science is "settled" and there is no debate. But scientists disagree: They say there is great uncertainty, and they reflected this uncertainty in their fifth and latest assessment for the United Nations Intergovernmental Panel on Climate Change (IPCC)...As for the impact of that future warming, a new study by a leading climate economist, Richard Tol of the University of Sussex, concludes that warming may well bring gains, because carbon dioxide causes crops and wild ecosystems to grow greener and more drought-resistant. In the long run, the negatives may outweigh these benefits, says Tol, but "the impact of climate change does not significantly deviate from zero until 3.5 degrees C warming." (NP, Ridly & Peiser, 151201C - Comment)

Scientists holding mainstream scientific views, who refuse to address AGW denier are accused of corruption and their intentions are questioned:

These scientists - leaders in their field - have had no trouble overseeing research that furthers government policy; their difficulty comes when they decide to pursue research that is ideologically incorrect...Most scientists, less capable and less able to attract funds, are bought by government, which directly or indirectly controls the overwhelming majority of scientific research. In the case of global warming, for decades one of the most heavily researched scientific issues, virtually no funding is available for dissenting views. So too in those areas of medical science subject to

political correctness. He who pays the piper calls the tune. To be clear, corrupting scientists by pre-determining their results in justification of public policy is untoward. Governments should stop doing it. Corporations would then have no need to fund counter research in self-defence. (NP, Solomon, 150814 - Comment)

It is easy to see how this likely discouraged some climate skeptics from answering the survey. In fact, American climate blogger Anthony Watts (a skeptic) wrote that two of his colleagues received the survey but did not respond "because they didn't believe their opinion or identity would actually be protected." (NP, Lau, 160401B - Comment)

The first bit of sensitivity training for the new Trudeau cabinet should aim to alert ministers to the fact that they are being bamboozled by professional statistical tricksters, not just over the science of climate change. (NP, Foster, 151113B - Comment)

As for the "two degrees" slogan, this has always been a political construct, it doesn't emerge from thermodynamics or meteorology. So it's starting to look like the old days again, when the science gets heavily torqued to promote a predetermined policy agenda. The preface goes on: "The Government of Canada takes great pride in the work of all of Canada's scientists and will continue to feature science work to Canadians." Huh? I can think of lots of Canadian scientific work on climate that the government will never listen to, because it doesn't support the policy agenda. (NP, McKittrick, 151126 - Comment)

Deniers often cite each other to provide the appearance of wider support for their assertions of scientific uncertainty and accusations of corruption:

A 2011 analysis of 311 estimates of the SCC by Professor Richard Tol - a leading climate economist and developer of one of the three economic models used by the IWG - found the "mean" estimate fell consistently from 1992 to 2011, which Tol notes "suggests that estimates of the impact of climate change have become less dramatic over time." (NP, Morris, 150825A - Comment)

Gore also forecast doom for polar bears (who can forget that cute animated polar cub from *An Inconvenient Truth*?) but, as Canadian polar bear expert Susan Crockford has inconveniently noted, the bears are OK, and studies have been manipulated to make the situation look bad. (NP, Foster, 150904 - Comment)

Mann also tweeted falsely that I was "the best climate change denial has to offer." Scientifically renowned skeptics on the subject have virtually shut down the original zealots, and Mann is clinging to his hockey stick like a passenger on the Titanic grasping a raft. I commend to readers *Climate Change: the Facts*, edited by Alan Moran and published by the Institute of Public Affairs of Australia, and Mark Steyn's

edited *A Disgrace to the Profession* (published by Stockade), exposing the hockey stick, in the words of more respected scientists than Mann, as "a brazen fraud" and a "crock of obvious drivel" and similar terms, for hundreds of pages. There is a full explanation of the long warming pause (despite massive increases in carbon emissions) and of "the growing chasm between the predictions of the International Panel on Climate Change (IPCC) and the real-world temperatures." (NP, Black, 150926 – Opinion)

*Prioritizing other problems.* This category of AR claims is present, but to a lesser extent than the others. Issues concerning employment seem to bridge the gap between this category and the environmentalism as a threat to social progress. The strategy of prioritizing other problems discusses those issues which are (theoretically) separate from and existed prior to those caused by climate change specifically – such as disease and poverty. Claims that environmentalism is a threat to social progress blame environmentalists and government policies (emanating from their environmental positions and pressure) for current economic problems and job losses. These two are often presented together and difficult to delineate. The economy and jobs are prized (often above all else) in all four sources. Following the downturn of oil prices during the study period, the Alberta economy was struggling and suffered job losses in the energy sector. This reality was often used as a cudgel to attack any plans to cut emissions:

Saskatchewan Premier Brad Wall sounded a cautionary note, saying the need to make progress on climate must be balanced with concern for the hard-pressed energy sector, where tens of thousands of workers have lost their jobs. "We need to do better in terms of our record on climate change, our province needs to do better," Mr. Wall said. "But we cannot forget the jobs that are at stake in a sector that's undergoing a lot of stress right now due to \$40 [U.S. a barrel] oil. We've got to find the right balance." (GM, McCarthy & Galloway, 151124B - News)

We're never going to have a summit on it, but there are jobs being shed by the thousands out west. A whole industry that fired a good part of the Canadian economy and supplied the taxes that feed our social programs, kept people in jobs, contributed to equalization payments - and, yes, even to the \$2.5 billion we are now going to

courier off to the global climate fund - is in free fall. (NP, Murphy, 151219 – Opinion)

The intensive results presented here illustrate a wide variety of AR claims in G&M, NP and Fraser. The strategies vary, but common throughout is the use of AR claims to undermine government regulation. This objective aligns with neoliberal ideas that characterize all CTTs. Similarities in AGW discourse exist between newspaper articles and CTTs, but a definitive connection between the two cannot be established beyond this. The following section will provide background information on a small group of individuals and one institution who promote AR in the data.

**4.3.4 Key AR individuals and organizations.** The final section briefly discusses key individuals and one organization shown to promote AR discourse in the intensive results. Although, an exhaustive description of their actions and discourse is not feasible here, it is expected that a brief consideration will provide greater insight into specific actors promoting AR. Concrete examples of actors as empirical phenomena buttress the discursive practices outlined in the results.

*National Post.* Lawrence Solomon wrote six articles in the NP sample that primarily contain AR claims. He writes for the Financial Post section of NP and has been writing articles for approximately forty years. His biography in Financial Post labels him as “one of Canada’s leading environmentalists” (Financial Post, 2018). He is a founder and managing director of Energy Probe Research Foundation - a think tank that promotes uncertainty - and works as a policy advisor for the Heartland Institute in the U.S. – a prominent CTT that also denies, or manufacturers uncertainty about, climate change (O’Connor, 2017). In 2008 he wrote a best-selling book: *The Deniers: The world-*

*renowned scientists who stood up against global warming hysteria, political persecution, and fraud.* This book claims uncertainty exists in the scientific community. NP provided Solomon with columns to promote his book and the newspaper was eventually forced to offer a correction and apology to the disgruntled scientist Andrew Weaver (a Nobel Prize winning member of the IPCC). He had been continually misrepresented by Solomon in the columns (Hoggan and Littlemore, 2009) and accused the newspaper and its journalists of implying that he was “untrustworthy, unscientific, and incompetent” (CBC News, 2015).

In 2013 a B.C. supreme court awarded Weaver \$50,000 for defamation by the NP and named Terence Cocoran, Peter Foster, and Kevin Lebin in the suit. The NP was ordered to remove the articles from its electronic database and publish a full retraction. The case was overturned in 2017 by the BC Court of Appeal and, at the time of writing, is awaiting a re-trial (Brean, 2017). Articles written by these individuals are present in the sample collected: Cororan (6 articles), Foster (13 articles), and Lebin (4 articles) – and all contain discourse similar to that discussed in the defamation case.

***Fraser Institute.*** As a registered charity in Canada, Fraser’s general revenue and expenses are publicly available. Records show \$10,913,225 in revenue for 2015 and \$10,808,051 for 2016. All but approximately 20% of this revenue consisted of receipted donations, non-receipted donations, and gifts from other charities. The remaining 20% is listed as “all other revenue” (Canada Revenue Agency, 2018). Over these two years Fraser employed 45 full-time and 10 part-time individuals (Canada Revenue Agency, 2018).

Registered charities are not required by law to divulge their contributors and Fraser has chosen not to do so; however, various pieces of information have been made public. Through legal proceedings in the U.S. - a 1998 Master Settlement Agreement in the U.S. between 45 States and the Major tobacco companies – it was revealed that the Fraser Institute had been receiving funding from the world's second largest tobacco company to produce books such as *Passive Smoke: The EPA's Betrayal Of Science And Policy* and host conferences to discuss the subject (Gutstein, 2018). It was also revealed in 2012 (and further confirmed by Fraser in 2014) that the institute had accepted donations from the Koch brothers – U.S. Tea Party Billionaires and prominent fossil fuel industrialist known for supporting CTTs that promote uncertainty (Tencer, 2014).

In his seminal work on corporate interlocks, William Carroll (2010) demonstrated Fraser's growing prominence in tying Canada's largest organizations together from 1976 – 1996. By 1996, it was one of five policy boards “at the heart of the corporate-PG network [within] a tightly integrated inner circle” (Carroll, 2010, p. 169). Fraser's board of directors consists of elite investors, energy company CEOs and academics. As shown in Table 5, the board has numerous ties to the fossil fuel energy industry (Fraser Institute, 2018).<sup>26</sup> Several members oversee the operation of major fossil fuel companies with interests in Canadian oil. Fraser is also listed as a member of the State Policy Network, a web of CTTs located primarily in the U.S that includes the Cato Institute, Americans for Prosperity, and the Heritage Foundation. The network is well coordinated

---

<sup>26</sup> Board membership is publicly available on the Fraser Institute's website. Membership on other boards and employment details were found on those companies' websites or on established news sources online.

and goal-oriented (Mayer, 2016). Journalist Jane Mayer outlines a pitch made by its president in 2013 who advertised that it offers its customers (i.e., corporate industry) “raw materials’ and ‘services’ so that local chapters could assemble the ideological products at home. ‘Pick what you need [she told a group of potential customers]...’and customize what works best for you’ (Mayer, 2016: 345).

*Table 5 – Fraser Institute Board of Directors with Fossil Fuel Connections*

<b>Board Member</b>	<b>Position</b>	<b>Worth Noting</b>
Peter Brown	Chairman	Founded investment group Canaccord Genuity (and remains the chairman of the board of directors) - group has managed transactions worth hundreds of millions for major oil and gas corporations (Canaccord Genuity, 2018). These include AB based oil and gas industry such as TransGlobe Energy, AltaGas, and GN Energy Corp
Derwood Chase Jr	Director	A trustee of the prominent neoliberal U.S. think tanks: Reason Foundation and Mont Perelin Society
Paul J. Hill	Director	President and CEO of Hill Companies and Harvard Developments – including AB Harvard Energy
Kent Jespersen	Director	Previously a senior executive at Husky Oil Limited. President of Foothills Pipe Lines Ltd. and NOVA Gas International Ltd. Chairman of the board and director of Seven Generations Energy Ltd. and North American Oil Sands Corporation
Andrew Judson	Director	Managing Director of Camcor Partners - a private equity fund manager for oil and gas companies. The group claims to have raised \$1 billion for helping to create more than 75 oil and gas companies
David R. Mackenzie	Director	CEO and Director of Fano Energy, Director of Avant Garde Energy Corp., Director of Tamarack Valley Energy Ltd.
Gwyn Morgan	Director	Founded Enana. Former CEO of Encana
Herbert C. Pinder Jr.	Director	Director of Huron Energy Corporation
Ron Poelzer	Director	Vice Chair on the Board of Bonavista Energy Corporation. Chairman of the Board of Nuvista Energy
Bill Siebens	Director	Chairman of Freehold Royalty Trust
Michael A. Walker	Director	An FI founder. Economist

Fraser employs some noteworthy individuals. Kenneth Green (discussed previously in the intensive section of this chapter who wrote 25 of the 37 articles in the Fraser sample and 2 articles in that of NP) is listed on the Fraser website as “Resident Scholar and Chair in Energy and Environmental Studies and former Senior Director of the Centre for Natural Resource Studies at the Fraser Institute” (FraserInstitute.org - A, 2018). He holds a doctorate in Environmental Science and Engineering from the University of California. Green has also worked for the Reason Foundation, the Environmental Literacy Council and the American Enterprise Institute – all of which have promoted denial and uncertainty to varying degrees. Green has had a great deal of access to Canadian newsprint for almost two decades, writing (or co-authoring) 271 articles from 2001-2018 in most major newspapers across Canada (including 125 in NP and 9 in G&M).

Ross McKittrick is a professor of Economics at the University of Guelf and listed on Fraser’s website as a Senior Fellow of the Fraser Institute (FraserInstitute.org - B, 2018). He wrote three articles in the NP sample and co-authored one in Fraser. Results show that he proliferates diversionary reframing and scientific uncertainty claims. Although he has only limited coverage in the sample it is worth noting that he has written 89 articles for NP between 2001-2018. He has also written for G&M, Calgary Herald, Leader Post, Star-Phoenix, Telegraph-Journal, Windsor Star, and the Winnipeg Free Press. In 2002 he wrote a book with another denier, Christopher Essex (Dunlap & Jacques, 2013), titled *Taken By Storm*, that manipulates and denies scientific claims. In 2005, he wrote a paper criticizing the climate scientist Michael Mann’s famous hockey stick graph (showing the global temperature rising dramatically as of late) and had it published in the journal *Geophysical Research Letters*. In 2007, McKittrick was credited with coordinating and

Essex with being the lead writer of the report, *Independent Summary for Policymakers*, a response to the then forthcoming *IPCC Fourth Assessment Report*. The Fraser's stated rationale for the report was the need to combat bias:

...chapter authors are frequently asked to summarize current controversies and disputes in which they themselves are professionally involved, which invites bias. Related to this is the problem that chapter authors may tend to favor their own published work by presenting it in a prominent or flattering light. Nonetheless the resulting reports tend to be reasonably comprehensive and informative. Some research that contradicts the hypothesis of green-house gas-induced warming is under-represented, and some controversies are treated in a one-sided way, but the reports still merit close attention (McKittrick et al, 2007)

#### **4.4 Conclusion**

The analytical resolution in this chapter consists of both extensive and intensive results emerging from a content analysis. This critical methodological pluralism provides breadth and depth respectively. Extensive results narrow the focus of study, guiding the necessary, but not sufficient, intensive analysis; laying the groundwork for a structural analysis of causal mechanisms and conditions.

The policymaking theme is predominant in all four sources and coincides with the use of political voices as primary sources in newspaper articles. RF and AR exist in both newspapers and Fraser; however, there are meaningful difference between sources regarding how RF and AR are used quantitatively and qualitatively. G&M and C.D. Howe contain a majority of RF, and some AR (in the case of G&M). NP contained a mix of both RF and AFR, and Fraser had a considerable amount of AR constituting a majority of claims. The intensive results concerning AR claims present the particular form they take in Canadian newspapers and CTT Op-eds. This, in combination with extensive results showing widespread use, illustrates a planned and concerted effort to

disseminate AR in Canada. One organization and multiple individuals acting to promote AR were briefly discussed at the end of this chapter to provide additional insight into the specific actors operating in Canada.

The description and analytical resolution presented here necessarily abstract specific phenomena for further analysis. Demi-regularities found across articles and examples of passages are insufficient for detecting generative mechanisms and conditions. These empirical results must be considered using various forms of inference, by moving between the concrete phenomena and abstract theoretical interpretations. The following chapter applies this approach using a model of structural analysis.

## Chapter 5: Discussion

The preceding chapter detailed the presence of reflexive (RF) and anti-reflexive (AR) claims, dominant thematic frames, primary voices constructing the anthropogenic global warming (AGW) narrative, and the specific issues covered in the *Globe and Mail* (G&M), *National Post* (NP), and the Fraser and C.D. Howe Institutes. Ontologically, these discursive objects of study, or phenomena, reside within the empirical domain of reality. Their meaning in that domain can only be understood on a superficial level, and the underlying relations constituting their manifestations are not readily discernable. All phenomena result from, and represent, the outcome of dynamic multitudes of structures triggering or inhibiting others' generative mechanisms within the 'real' domain of reality. These relations can be elucidated (to the extent possible) through a process of structural analysis whereby a movement beyond traditional forms of inference – deduction and induction – to abduction and retroduction is made to abstract and assess empirical phenomena (Danermark et al., 2002).

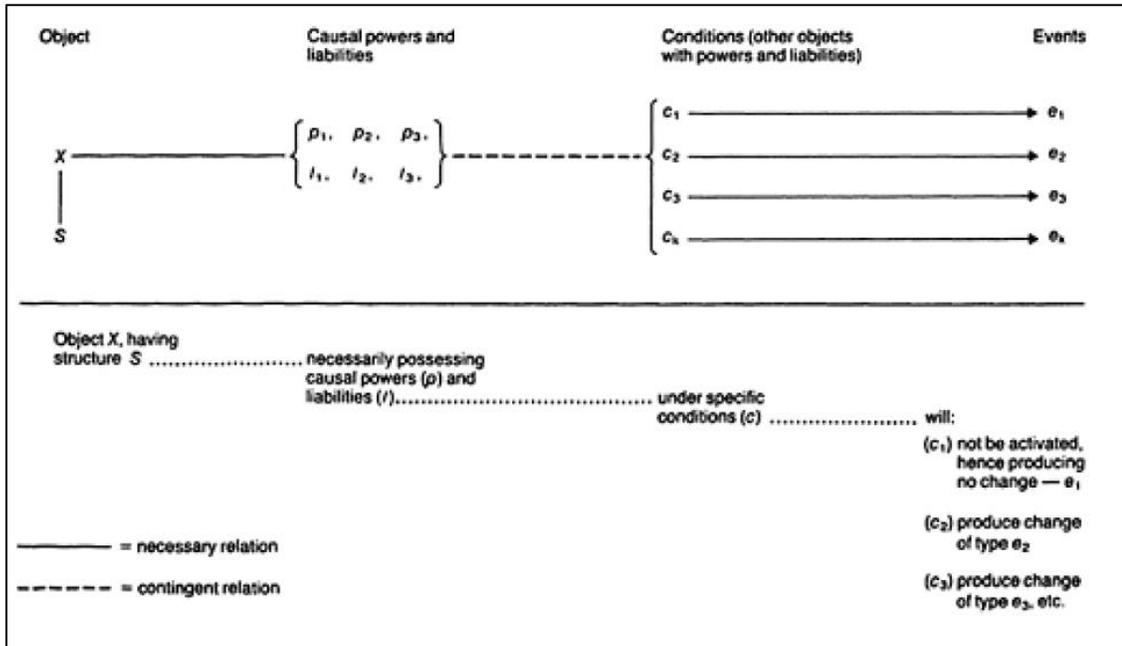
Sayer (2010: 74) provides a useful critical realist model for structural analysis with his 'structures of causal explanation' (figure 1). The 'events' located on the far right of the figure refer to phenomena perceived in the empirical domain; the term 'event' denotes this perception. The 'object' on the far left is a social structure, consisting of a generative mechanism with causal powers and liabilities that are triggered, or inhibited, by 'conditions' (other objects with generative mechanisms) in the 'real' domain.<sup>27</sup>

---

<sup>27</sup> Objects have multiple generative mechanisms, each with multiple causal powers and liabilities. A definitive and final explanation of all causal mechanisms and their powers/liabilities constituting any phenomenon is impossible in an open and dynamic system. Therefore, the aim is to identify and elucidate the most influential mechanisms based on the evidence in combination with inferential reasoning.

Objects cannot be perceived directly; instead they can only be inferred through a synthesis of observation (of events) and logical reasoning. Critical realism (CR) transcends simple cause and effect approaches by presenting a model of complex processes, constituted by mechanisms that interact in a dynamic and open system to produce events and objects.

*Figure 1 – Structures of Causal Explanation (Sayer, 2010, p. 74)*

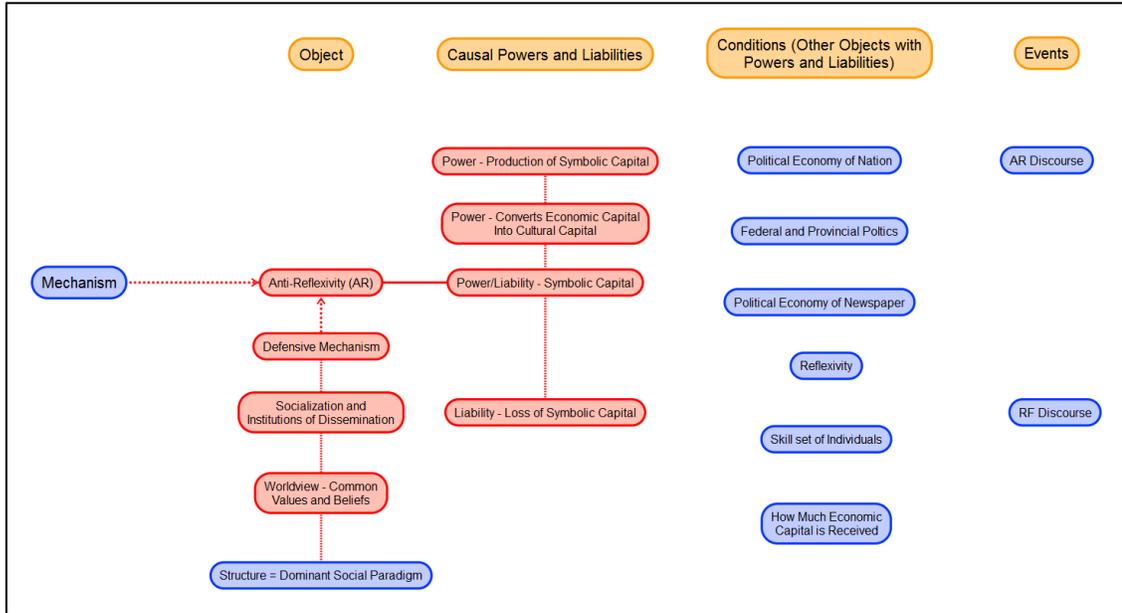


Sayer's model is followed here. The events manifested in the empirical domain are the discursive objects presented in the results. To explain how and why these discursive objects exist - specifically instances of AR *discourse* - this chapter outlines the relationship between the mechanism that generates it (anti-reflexivity), the underlying structure of the AR mechanism (dominant social paradigm) and the conditions that influence the mechanism causing it to manifest discourse, which is context-specific. This will be accomplished through abductive and retroductive inference connecting the existing literature to the empirical data collected. Worth noting is the distinction between *anti-reflexivity* – as an ideology institutionalized through practice, and anti-reflexive *discourse* – as the frames and claims used in news-media to perpetuate the ideology.

The literature covered in chapter two, along with the political economy of Canada briefly discussed in the introduction, provides the study with those elements required to elucidate the structure of causal explanation. Abduction is employed to re-frame the events (i.e., AGW discourse) in pre-existing theoretical frameworks of understanding. Figure 2 depicts the model of causal explanation based on this operation. Moving across the figure (from the left), the process consists of a structural analysis of the empirical manifestation of AR discourse by the generative mechanism of AR, itself influenced by several external conditions. The analysis is guided by three primary questions: (1) what is the nature of the relationship between the dominant social paradigm and AR; (2) what is the nature of the relationship between AR and symbolic capital; and (3) how do other structures (i.e., conditions) influence the manifestation of AR discourse in the empirical – the external and contingent relationship? It is argued here that the dominant social paradigm (DSP) is the structure underlying the manifestation of AR discourse in news-

media. There are multiple generative mechanisms of DSP, however the specific mechanism considered in this study is that of anti-reflexivity – a social movement, rooted in ideology and consisting of a wide range of actors and organizations to maintain the ideals of, and defend, DSP. The causal powers and liabilities of this mechanism are triggered by conditions – specifically, the Canadian socio-historical circumstances – that lead to a variety of distinct forms of AR in the AGW discourse. In other words, AR discourse in Canada manifests alongside a variety of viewpoints and issues specific to the Canadian context. This context, and AGW discourse constituting it specifically, condition the strategy and success of the AR approach.

*Figure 2 –Structures of Causal Explanation for AGW*



This analysis begins with the generative mechanism of AR followed by its relationship to DSP. Next, a single causal power and liability of AR – symbolic capital - will be discussed, followed by a brief consideration of the conditions likely influencing the symbolic capital of AR. The final section of this chapter consolidates these in consideration of the specific form of AGW present in Canadian newspapers.<sup>28</sup>

### **5.1 Anti-Reflexive Forces: A Reactionary Movement.**

McCright and Dunlap (2010: 101) argue that “the American conservative movement is a force of ‘anti-reflexivity’ attempting to protect the industrial capitalist order” and that the individuals within these institutions are driven by “their ideology [which] leads them to reject impact science in a reactionary attempt to reassert the industrial capitalist order of simple modernity (p. 110).” Though a wide variety of organizations, institutions and actors participate in AR and thus combine to constitute the generative mechanism through their practices, CTTs are considered the “key organizational component of the conservative movement” Jacques et al. (2008, p. 351). Principally, a conservative think tank (CTT) is the institutionalized form of AR (McCright & Dunlap, 2000; 2010).

According to Mottl (as cited in Austin, 2002, p. 75), a countermovement is “a conscious, collective, organized attempt to resist or reverse social change.” The term ‘countermovement’ presupposes a preceding threat. This threat, in the broadest sense, is the spatio-temporal context of reflexive modernization. More concretely, manifestations

---

<sup>28</sup> Although multiple, tangential causal powers and liabilities exist (e.g., disproportionate access to resources), they will not be discussed here. Symbolic capital is the primary focus of this study and the limitations of depth and scope preclude deeper consideration of other powers and liabilities. Similarly, only four conditions will be discussed (despite the existence of others) in the third section of this chapter. The decision to include specific conditions while excluding others was based on the previous literature and results of this study.

resulting from reflexive modernization jeopardize (1) the widely held, deeply rooted worldview of the DSP and (2) the economic, social, cultural, and political capital held by the fossil fuel industry (see Malm, 2016). Considering this, Jacques (2006, p. 91) declares that “what is at stake is the legitimacy of the status quo of world politics nestled in our dominant core civic paradigm of Enlightenment liberalism that keeps the structure of obligations national and market based.”

Concrete manifestations resulting from reflexive modernization are numerous in Canada, and include, but are not limited to, practices of impact science (and the scientists themselves), environmentalists, institutions and practices, and sympathetic politicians promoting and enacting environmental policies. The issue of AGW has been discussed by federal governments from the mid 1980s on and, despite being empty and ineffective, policies have been put forward to address it (Simpson et al., 2007). Indigenous activists and environmentalists, while small in number, have notably gained widespread media attention for their efforts opposing fossil fuel exploitation. Simultaneously, RF discourse, specifically regarding the promotion of regulation, has been, and continues to be, found prominently throughout newspaper-media. While a more in-depth analysis of these groups and practices constituting the core of RF would be fruitful, it is beyond the scope of the present work; therefore, the ‘concrete manifestations following reflexive modernization’ have been operationalized here as the discourse of RF. Although RF is not the focus of this study per se, developing a limited understanding of its relative presence and use in Canada is necessary for understanding how it influences AR discourse in Canadian media.

RF is prominent, with claims outnumbering those of AR in all sources except Fraser. However, this prominence is misleading. AR claims are all framed as a ‘response to’ or ‘arguments against’ RF claims. This is typically explicit in the text. Therefore, high numbers of AR claims are often accompanied by RF claims. For instance, AR claims served to undermine the positions, policies, and character of the top three sources of journalists - Premier Notley, Prime Minister Trudeau, and President Obama. These individuals all took strong public positions on AGW and advocated for policies to address it. Their positions are prominent in the data, and AR forces respond accordingly.

**5.1.1 Membership and funding.** AR exists within pre-existing CTTs that had previously formed as a reaction to Keynesianism. Shortly after their inception, these CTTs began promoting neo-liberal economics and were already set up for the environmental anti-reflexivity they produce today (Antonio & Brulle, 2011). This lends credence to the assertion (argued below) that AR can be conceptualized as extension and reorientation of those pre-existing values and ideals constituting DSP. These CTTs, including Fraser, do not focus solely on the issue of AGW; instead specific employees or sub-groups within the organization are tasked with addressing the topic of AGW (Brulle, 2014; Neubauer, 2011).

Individual CTTs tend to work independently but operate within an ‘Elite Policy and Information Infrastructure (EPII)’ (Neubauer, 2011, p. 66). The EPII is a decentralized network that provides social and economic capital to individuals and institutions by connecting its members to one another and to potential funders (Jacques et al., 2008). These networks are well funded and wield various degrees of political influence (Oreskes & Conway, 2011; Mayer, 2016; Taft, 2017). For instance, the State Policy

Network, founded in 1992, consists of 64 think tanks across North America (including Fraser) and had a budget of \$83.2 million in 2011 (Mayer, 2016, p. 345). Conceptually speaking, these networks are external and contingently related to individual CTTs such as Fraser. That is, EPIIs influence individuals CTTs, but are not necessary for their existence.

CTTs are asymmetrically related to the fossil fuel industry - they would cease to exist without the fossil fuel industry, but not vice versa. Fossil fuels have become the world's most profitable enterprise (Nikiforuk, 2012) and the prime target of the environmental movement. Unsurprisingly, the fossil fuel industry is the primary funder of CTTs (Brulle, 2014; Lahsen, 2005). As stated above, CTTs are necessarily reactionary; they *are* those AR forces that defend the fossil fuel industry from threats emanating from reflexive modernization. Importantly, CTTs provide 'cover' for the unpopular positions of fossil fuel interests (Hoggan & Littlemore, 2009; Lahsen, 2005).

The level of financial support is contingently related to CTTs (Brulle, 2014, Farrell, 2016; Lahsen, 2005). Farrell (2016), for instance, demonstrates that corporate funding and AR thematic framing – including the language/discourse - are closely related. A connection between CTT funding in Canada and AR forces has not been established in the scholarly literature, however background research into Fraser for this thesis reveals that it is well funded, likely by those with deep fossil fuel industry ties. Many of its board members also run major Canadian corporations, several of which are in the fossil fuel industry. For example, Gwyn Morgan is a prominent member of the board of directors and the former CEO of Encana Corporation (a natural gas company involved in

fracking operations in BC). He personally donated CAD \$1 million to Fraser through his family foundation (Gutstein, 2018, Location No. 3897).

Brulle (2014) provides insight into the funding of CTTs in the U.S with his study that found annual income for ‘tax deductible charitable educational organizations’ and ‘non-tax-deductible advocacy organizations’ - both part of what he refers to as ‘the climate change counter-movement’ - was approximately \$250 million and \$30-\$60 million in 2009, respectively. Foundation grants represented an average of 25% of the charity’s funding and 14% of the advocacy organization’s funding. A wide variance was found between individual organizations, with percentages ranging from 0% to 74%, with CTTs garnering the most support (Brulle, 2014, p. 687). Evidence of efforts to conceal sources of funding was also found, which made determining the precise source of funding difficult. Despite this difficulty, trends in the data were suspect. For instance, Koch Affiliated Foundations and ExxonMobil Foundation discontinued direct funding of CCTs in 2007 at the same time Donors Trust/Capital (an organization setup to connect donors to recipients discretely) saw a rapid increase (Brulle, 2014, p. 690). Greenberg et al. (2011) describe similar tactics for obscuring funding that are used by the Calgary-based non-profit organization, Friends of Science. This denialist movement – which produces videos, radio ads, and op-eds published in major daily Canadian newsprint - is financially supported by the Alberta oil patch funnelling money to it through an intermediary non-profit, the Calgary Foundation (Greenberg et al., 2011)

Results outlined in the previous chapter demonstrate that Fraser is well funded. The institute claimed total assets of \$13,598,160 in 2016 (Canada Revenue Agency, 2018). From 2014-2016, its main sources of revenue are ‘other registered charities’ at

\$4,121,416 and ‘Interest and Investments’ at \$1,685,365. In April of 2012, a Huffington Post article reported findings from the U.S. Center for American Progress that revealed that the Koch Brothers donated \$373,721 to Fraser (Tencer, 2014). This reporting was confirmed by a former executive after the piece was published. The assets, revenue, and donations are not limited to AGW denial; to reiterate, CTTs serve many functions in promoting libertarian and neo-liberal ideologies. However, these numbers show that Fraser possesses substantial amounts of economic (and social) capital. These are influential factors in precipitating their success (Brulle, 2014).

## **5.2 The Dominant Social Paradigm**

Fossil fuels have played a fundamental role in the rise, and continued dominance, of modern industrial capitalism (Malm, 2016; Newell & Patterson, 1998). In *Fossil Capital*, Malm (2016) outlines the structure of capital, its causal powers, and the conditions of 18th century Britain that led to the increased role of fossil fuels in industrial development. Over time, fossil fuels and capital have been “welded together” into a “socio-ecological structure” that he refers to as the “fossil economy” (Malm, 2016, p. 11). This union is driven by capital’s incessant need for control and efficiency. Fossil fuels possess several key characteristics that make them particularly well-suited to the economic capitalist system, including a high rate of return on energy input, and a high conduciveness to transport (Neubauer 2011, p. 68), allowing for the compression of time and space (Marx, 1939/1973).

The abundance of this energy source combined with the prerogatives of a capitalist economic system have shaped the current socio-historical context and, in the process, bestowed a relatively small number of individuals with a disproportionate share of

wealth and power (Nikiforuk, 2012). This wealth and power, translated into a Bourdieusian conceptual framework, represents economic, social, symbolic, and political capital, all of which manifest concretely in innumerable ways. Both the possession of these various forms of capital, and the contingent, dialectally-related, socio-economic-political system are now confronted with the by-products of the source influencing their specific manifestation, and structure.

In considering the creative destruction of modernity, Harvey (1992, p. 16) declares that “if the modernist has to destroy in order to create, then the only way to represent eternal truths is through a process of destruction that is liable, in the end, to be itself destructive of those truths.” Beck (1994, p. 2) echoes this Marxist sentiment and asserts that reflexive modernization represents the “(self-)destruction” of industrial society that follows from its successes, not its failures; in this case, the successful realization of continuous growth - necessarily constituting the capitalist system (see Harvey, 2014; Marx, 1906/2011) - leads to risks undermining the fundamental premises of its project. More specifically, the dominant social paradigm (DSP) – a worldview (or ‘masterframe’) positing prosperity through continuous growth and development – is confronted by its own contradictions. This confrontation is reflexive modernization, which sees the “taken for granted premises” of DSP “disenchanted” and “dissolved” (Beck, Bons, & Lau, 2003, p. 3).

The DSP worldview addresses the relationship between the physical and social environments and considers endless economic growth to be necessary and positive. It is an abstract construction dialectically related to the material practices of capitalism. That

is, it guides, and is guided by the processes of capital relations and accumulation.<sup>29</sup> DSP holds a strong and stable economy in the highest regard, above all else, with the assumption that any other issue can be addressed by the fruits of economic progress (Douglas, 2007). It sees human ingenuity as the driving force of prosperity and success. Markets and free competition are viewed as the most efficient way to incentivize ingenuity in developing problem-solving technologies (Douglas, 2007). As a social construction, DSP structures practice and discourse and, through the AR generative mechanism, defends the current political economic system of production (i.e., capitalism).

In CR parlance, there is an internal and necessary relationship between DSP and AR. This relationship is symmetrical. DSP would cease to exist without the presence of AR, collapsing under the weight of its own contradictions. DSP persists, however, through processes of socialization within institutions of dissemination - one of which being the, primarily defensive, institutions and discursive practices of AR. Likewise, AR cannot exist without the presence of DSP. The mechanism exists solely to promote and defend the values and ideals it constitutes.

DSP, formed within the crucible of enlightenment ideals (Jacques, 2006), would at first glance appear to presuppose AR; indicating an asymmetrical relationship. However, it is being proposed here that AR represents the reorientation of those dominant values and ideals of DSP towards a more defensive posture. That is, under the increasing

---

<sup>29</sup> The focus of this thesis remains on the discursive construction of reality and the symbolic struggles over the power to do so; therefore, the specific relationship between DSP and capitalism's relations of production will not be discussed here.

pressure of inherent contradictions (e.g., ecological limits to growth), that are highlighted by the concrete manifestations of RF, discourse previously utilized to promote the status-quo is advanced to defend it as well. Therefore, AR is a constitutional ‘part’ of DSP, in the extended form of its internal and necessary values and ideals.

RF represents the greatest threat to the DSP. Side-effects undermining modern ideals, and more specifically the capitalist system of production, are difficult (perhaps even impossible) to reconcile within the ideology. Environmental consequences following a system of continuous compound growth through production exemplify this predicament.<sup>30</sup> The movement towards financialization may perhaps assist in slowing the rate of resource extraction as capital moves from wealth accumulation through production of goods to market speculation (Harvey, 2014), however, emissions continue to rise, signaling the continued increase of resource exploitation (IPCC, 2014). The reflection of impact science clearly states that greenhouse gasses (GHG) must be reduced immediately to avoid catastrophic risks associated with AGW. Without an alternative energy source as inexpensive and mobile as that of fossil fuel, growth must end, and possibly reverse. Further still is the primary role fossil fuels play in most products and processes of production, such as in food production. This has extreme consequences for the totality of the current Western political, economic, and social systems – specifically, the cessation of the capitalist political-economic system (Harvey, 2014, p. 232).

---

<sup>30</sup> Growth here refers to need for capital (as an entire system consisting of relations of production) to accumulate ever increasing amounts of wealth. However, the relations of production and the regional differences, across Canada, and the global economy are not considered in this thesis. Instead, growth is used as a useful shorthand for the entire constellation of human relations and practices constituting the capitalist imperative of accumulation.

Simultaneously, reflexive modernization also provides new spaces for contesting the authority of impact scientists. Impact science is not immune to the breakdown of those mechanisms that previously structured social organization. The radicalized version of modernity, characterized by struggles over meaning, draws the symbolic capital of impact science back into play. Here symbolic capital becomes both a causal power and liability of AR (a dynamic discussed below). It is in this space that AR becomes an object of interest for further analysis.

In terms of social power, the DSP controverts RF through the mechanism of AR as a “universal cultural policing mechanism to ensure compliance with the most powerful world political forces that remain relatively invisible in our daily lives, so long as we acquiesce” (Jacques, 2006, p. 96). In line with Bourdieu’s constructivist structuralism, the objective structure of DSP is continuously constructed and defended by conservative networks of organizations - with conservative think tanks (CTTs) leading the charge. The subjective phenomena of discursive practices simultaneously reproduce and are products of DSP. Claims asserting that ‘environmentalism is a threat to social progress’ reflect this and capture more explicit discourse of DSP. Other AR claim categories used for this study are also rooted in this worldview, presuppose its value implicitly (to varying degrees), and are designed to defend it (Jacques, 2006). For example, anti-regulation presupposes that a neoliberal ideology represents the best option for a modern political economy. Neoliberal ideology is, in theory, structured to allow the greatest

degree of “freedom” to the market by placing firm limits on government’s role.<sup>31</sup> CTTs work to construct coherent narratives supporting these ideals, specific to social and cultural contexts.

### **5.3 Causal Powers and Liabilities**

The literature shows that in (correctly) perceiving the threat to economic capital emanating from holders of cultural capital – specifically impact scientists (i.e., AGW science and scientists), the fossil fuel industry seeks to use its economic capital to undermine, or reduce, the cultural capital of AGW science (Brulle & Dunlap, 2015; Jacques et al., 2008; McCright & Dunlap, 2010;). This is accomplished through the ‘exchange’ of their economic capital (Bourdieu, 1998) for cultural capital. Bourdieu (1998, p. 34) refers to the space where different forms of capital compete as the ‘field of power’. He contends that a ‘disequilibrium’ occurs when holders of one form of capital (in this case economic capital) view the reproduction of their power as threatened by holders of another form of capital (here cultural capital). This threat is met with efforts to undermine it, on its own terms (i.e., from within the threatening field). In empirical (concrete) reality, the exchange of economic capital for cultural capital can occur in multiple ways - advertisements, access to newspapers, websites, television and so on. This thesis, however, considers the exchange through CTT funding. CTTs rely on the credentials of their staff (real or fabricated, in some cases) to produce cultural capital. They are provided with access to various forms of media access and the means necessary

---

<sup>31</sup> The qualification “in theory” is meant to note the divergence between theoretical neoliberalism and that which has been carried out in practice. Neoliberal governments often participate in the market more than they theoretically “should.” Though this is primarily to the benefits of elites. Efforts to ‘bail-out’ the major banks in the U.S. after the 2008 crash represent a good example of this.

to produce written materials for newspapers (Neubauer, 2011) and books (Dunlap & Jacques, 2013). The fossil fuel industry and other supporters provide CTTs with funding to engage in these efforts in order to enhance their cultural capital and to undermine that of impact scientists, environmentalists, and politicians sympathetic to the AGW issue.

Holders of symbolic capital possess the power to frame concrete reality through their preferred narrative of understanding. These narratives are necessarily specific to other broad forms of capital outlined by Bourdieu (1998) such as economic and cultural. CTTs require a portion of symbolic capital if their narrative is to be accepted. Subsequently, symbolic capital may also become a liability for CTTs lacking it.

Arguably, there are many additional causal powers possessed by CTTs – e.g., financial support for likeminded institutions (economic capital), the ability to connect disparate individuals and institutions (social capital), and so on; however, the role of symbolic capital as a causal power of the AR mechanism, specifically with regard to the contestation of cultural capital, is the main focus here. AR and the impact science buttressing RF exist on opposite ends in a continuum with various positions occupying the space in-between. Therefore, if the symbolic capital of RF actors is high, then it can be reasonably deduced that the share of AR is low. Research conducted here seeks to understand strategies for obtaining symbolic capital for influencing the perception of AGW and, more specially, the use and possession of symbolic capital by RF and AR forces seeking to disseminate their respective narratives on the subject. Going further, the specific purpose of CTTs is to capture, retain, and use symbolic capital. As a concrete manifestation of AR, their ability to ‘generate’ specific discourse is predicated on this power.

The possession of symbolic capital by CTTs, specifically regarding cultural capital, *is* the legitimization of their ‘expertise’ on AGW. The failure of AR forces in the 1980s to prevent and repeal environmental policies to inhibit the Environmental Protection Agency, represents a lack of symbolic capital in the field of AGW academia. Congressional resistance to these early efforts and public opposition to AR at the time, would not have occurred if the concerns of AR forces had been viewed as legitimate and fair, and the actors who were promulgating the concerns were, themselves, considered credible. This was further undermined by their politically motivated, biased position relative to the seemingly politically-neutral and objective scientific community (Gauchat, 2012; McCright & Dunlap, 2010). The turn towards undermining the science itself, using sympathetic scientists, or those with a clear conflict of interest (i.e., receiving funding from the fossil fuel industry), who possess expertise on the subject (or at least the portrayal of expertise) represents a move towards staking a claim, in the public arena, on cultural capital that is traditionally possessed by academia.

The prevalence of AR discourse in Fraser is unsurprising. This CTT represents a concrete manifestation of the AR forces (i.e., an institutionalized set of practices) described in the AR literature. More interesting is the frequency of AR discourse in the newspapers. The two sets of claims appear in nearly the same percentage of NP articles; and 35% of G&M articles contained AR claims. While many of these are anti-regulatory, and thus not directly attacking the symbolic capital of impact science, claims of scientific uncertainty, environmentalism as a threat to social progress, and diversionary reframing appear throughout the NP. These clearly undermine the symbolic capital of science and demonstrate the struggle for meaning. Claims of scientific uncertainty are the most

direct, and transparent, in this effort, but claims that environmentalism is a threat to social progress, and the myriad of discourses diverting attention away from inconvenient subjects, serve the same purpose. These claims are the discursive manifestations resulting from the concerted efforts and strategies devised by CTTs (Hogan & Littlemore, 2009; Oreskes and Conway, 2011).

The function of CTTs is to draw symbolic capital away from academia and provide legitimacy to their preferred narrative. The struggle for symbolic capital primarily occurs within the field of academia, but this field is overlapped, and influenced, by (most significantly) the corresponding fields of news production in the Canadian economy, and Canadian politics – all conceptualized here as ‘conditions’ in CR parlance. These conditions, specific to Canada, provide the context through which AR forces must navigate and struggle for symbolic capital. The competition ultimately occurs through a framing contest constituted by various actors submitting claims in a public forum.

#### **5.4 The Symbolic Struggle Over AGW Framing**

AGW research and policy are both highly contested with innumerable competing viewpoints from academics to stakeholders<sup>32</sup>. The wickedness of the problem combined with the diverse range of competing positions in the data leads one to surmise that the issue of AGW is itself a field of competing interests – wielding various types of capital (economic, cultural, social, political). Individuals and groups must simultaneously rely on and transcend their possession of capital *specific to their respective field* and capture

---

<sup>32</sup> ‘Stakeholders’ here refers to the entire network of energy production (fossil or otherwise) and transmission.

ever increasing amounts of AGW symbolic capital in a media – that is the public space. Touching on this idea, but not explicitly stating it as such, Broadbent et al. (2016, p. 3) refer to these as “cases within arenas of ‘self-organized contestation.’”

Self-organized contestation refers to specific subfields of understanding (e.g., economics, natural science, policymaking and so on). Struggles for symbolic capital occur through framing contests; that is, the ability to frame the issue of AGW within a preferred subfield of understanding. It is important to note that these, and other, subfields inevitably (and necessarily) overlap and inform one-another, however, symbolic capital captured and held by individuals or institutions provides the power to frame other fields as subfields within their own. For instance, the symbolic capital of economists may provide the power to frame environmental issues primarily using economic discourse, which is more consistent with the worldview of DSP.

RF claims outnumber AR claims in Canadian newspapers by a substantial margin in G&M, and slightly in NP. This seems promising for environmentalists; however, apart from their role in setting up AR (discussed above), most of these claims support regulation specifically through market mechanisms, as opposed to ‘arguing for the validity of scientific literature,’ or ‘questioning the idea of progress.’ ‘Recognizing impacts on the environment’ accounts for 25% of RF claims in G&M, but this is still far below support for regulation (72%). A ‘third way’ discourse of continued growth through increased fossil fuel exploitation *and* a reduction in GHG emissions is prominent in the data. This aligns (indirectly) with DSP and mainstream neoliberal ideology. Many who believe AGW should be addressed insist that action should be taken through market mechanisms as opposed to direct government intervention.

Mol, Spaargaren, & Sonnenfeld (2014) describe this in their ecological modernization theory (EMT). EMT rejects Marxist theories such as the treadmill of production that place capitalism at the center of environmental degradation and argue instead that a reinvention of environmental politics and relations between the state and private sectors has occurred and should continue to evolve. As part of this reinvention, there is greater emphasis put on economic-based approaches, such as technology development, green consumerism, and market-based mechanisms (Mol et al., 2014, p. 19) and technical fixes that are seemingly devoid of political content and demand no change in social power or relationship. Some theorists subscribing to this approach move beyond the academic/analytic element to normative positions and prescriptive practices such as direct policy engagement (Mol et al., 2014, p. 20)

EMT is problematic and has been criticized on several grounds. The primary criticism leveled by Marxist scholars is EMT's naivete concerning the underlying structural conditions of capitalism—more specifically, the need for continuous growth within an environment containing finite resources. PM Trudeau, PM Clark, and PM Notley all discuss addressing AGW within a framework of 'sustainable development,' whereby the economy and environment can co-exist. This is illogical; as Murphy (2015) points out (echoing Schnaiberg's treadmill of production theory and Jevon's paradox), increased efficiency following the development of new technologies may produce greater demands for more cost-effective resource. Therefore, oddly enough, reductions in emissions at individual sources may lead to more individual sources, and higher emissions overall.

EMT touts 'environmental governance' as a novel approach to policymaking that seeks to include environmental change in decision-making. Mol et al. (2014) move

beyond theories of neoliberalism and reframe the role of government from having a monopoly over the protection of public goods to working with ‘crucial’ economic actors, economic movements, and citizen consumers (p. 19). Swyngedouw (2010) concedes this may occur but insists that it represents a post-political reality that is “depoliticised” (in the sense of confrontational politics where worldviews are challenged and debated) and “institutionally choreographed,” where “governmentality is structured around forms of consensus formation, technocratic management and problem-focused governance” (p. 215). Western governments tacitly concede to the proclamation of the late British PM Margaret Thatcher that there is no alternative to capitalism. A post-political reality sees an explicit recognition of, and need to address, AGW by governments, ‘crucial economic actors,’ and citizens, but any solutions put forward are delimited by the solidified and depoliticized framework of a capitalist political economy. As Foster and Clark (2015) note in reviewing Naomi Klein’s book *This Changes Everything*, solutions calling for dramatic economic restructuring (i.e., questioning the continuous growth of capitalism) threaten the current political economy; Klein proceeds to do so, and, in the process, “crosses the river of fire,” moving beyond the delimited spectrum of “acceptable” political positions. This is almost certainly to be met with condemnation and condescension from all “mainstream” (read as dominant) political positions. No solutions that could be characterized as “crossing the river” are present in G&M. NP has a few articles containing the claim, but these articles discuss Klein’s book specifically,

with the sole purpose of attacking her ideas.<sup>33</sup> Despite arriving at antithetical conclusions regarding normativity, Mol et al (2014) and Swyngedouw (2010) provide insight into the current political-economic conditions in Canada influencing the manifestation and role of AR forces.

Aligning with EMT and the theory of post-politics is the dominance of ‘policymaking’ as a thematic frame in in both newspapers.<sup>34</sup> This result is further buttressed by authors predominantly using politicians as journalistic sources, and the primary topics of articles being those issues directly linked to policymaking (e.g., Alberta royalties, pipelines, and the Ontario Government Action Plan). Economic and energy interests is the second preferred frame of authors and these frames often overlap in articles. The Ecological/Meteorological frame is used sparingly in G&M (10% of articles) but is negligible in NP; and ‘culture’, and ‘science and technology’ are used less than 10% of the time in both newspapers. This dominance of policymaking and economic frames was also found in previous literature on Canadian media (see Stoddart et al., 2016; Young & Dugas, 2011).

In their longitudinal study of AGW in G&M and NP, Young and Dugas (2011) referred to this focus on policy making and economics as ‘thematic narrowing’.<sup>35</sup>

---

<sup>33</sup> A deeper analysis of RF in Canada is beyond the scope of this work but will certainly need to be addressed at some point.

<sup>34</sup> It should be noted that the concepts of ‘politicization and ‘depoliticization’ appear dichotomous and contradictory. However, within a post-political (depoliticized) condition, drawing scientific or cultural issues into politics (politicization) still exists. Post political theory simply asserts that this ‘politicization’ is delimited by politico-economic conditions. Post-political theory defines politics and politicization differently than mainstream sociology, leading to confusion.

<sup>35</sup> A ‘narrative complexity index’ was constructed for use during their study to provide a greater depth of understanding than was achieved here. This index, in combination with an inductive approach (as opposed to the primarily deductive approach used here) allowed them to surmise with greater confidence the lack of narrative complexity.

Noteworthy in their study is a decline in the mentions of AGW causation and in coverage on impacts over time. They posit that the discursive movement from environment and science issues to politics, policy, and business interests represents a ‘maturation’ of the subject in Canada. However, the use of the word ‘maturation’ is problematic – a conclusion they attest to. A maturation of the subject should expand into politics, policy, and business, but in consideration of causes and impacts, rather than simply substituting one set of concerns for another. Young and Dugas (2011) found that other issues, previously covered, were not being ignored completely, instead they were ‘banalized’ through superficial coverage of them. This is likely the result of a variety of contextual conditions: the political economy of Canada, the political economy of news in Canada, and the political position of federal government– in combination with the AR mechanism. The politicization of science and AGW is well documented in the U.S (Gauchat, 2012; McCright & Dunlap, 2011a), but less so in Canada. The dominance of policymaking and economic framing in the data here, along with the findings of Young and Dugas (2011) and Stoddart et al. (2016), strongly supports the hypothesis that AGW has become politicized (within a post-political delimitation) in Canada. The strategies of AR forces (discussed below), illustrate the claims and frames influencing this transition.

**5.4.1 Framing environmentalism as a threat to social progress.** Framing environmentalism as a threat to social progress is present in a considerable number of NP articles (23.1%). As stated, these claims represent more direct and explicit assertions of DSP than the others. Canada’s prosperity has been historically linked to the extraction of fossil fuels (Doern et al., 2015; Simpson et al, 2007) and this connection is asserted by many actors in the data. Environmentalism as a threat taps into deeply rooted, and

strongly held worldviews about Western society (Kahan et al., 2012) and those claims in the data re-frame the issue of AGW within an economic framework of understanding. DSP is a conservative master frame that, in concert with neoliberalism, depicts prosperity as following from a strong national economy. Parts of Canada (for example Alberta) that rely predominantly on fossil fuel exploitation seem particularly susceptible to this discourse. They have experienced prosperity in the short term and have yet to feel the longer term affects of AGW.

Each of the major issues discussed in the data - pipelines, Alberta's royalty rates, BC's LNG plant, and the provincial plans to address AGW, among others – are often framed to highlight how decisions regarding them would negatively affect Canadian economy. For example, President Obama's decisions to reject KXL is framed as “shut(ting) down a big part of Canada's energy economy” (NP, Cattaneo, 151107C - Column). Fraser labels carbon taxes as “anti-growth policies” (Fraser, Eisen & Lamén, 151123 – Think Tank) and government policies to adjust energy systems are referred to as “risks to Canada's future” (Fraser, Green, 160601A- Think Tank). The importance of ‘jobs’ are a commonly used talking point of AR discourse. Within DSP it is assumed that greater wealth for corporations will automatically lead to greater wealth for employees. However, growing wealth inequality now has 0.1 per cent of the population controlling a majority of the global wealth and power (Harvey, 2014). Davidson & Gismondi (2011) point out that this disparity is veiled by the use of terms like ‘jobs’, ‘employment’, and ‘the economy’. Further still, the conflation of workers’ interests with those of capitalists, distorts the relation and universalizes the interests of capitals.

Energy and AGW issues are framed in economic terms which maintains an amiable field of debate for economists and policy analysts while simultaneously drawing symbolic capital away from RF actors. Within the narrow framework of economic prosperity, the continuation, and acceleration, of fossil fuels extraction is a rational pursuit. The broader context of (likely irreversible) damage to the eco-system threatens the fundamentals of DSP and must necessarily be neglected, or re-framed as a ‘non-problem’ (Freudenburg, 2005) in the discourse.

This claim is also used to champion the benefits of fossil fuels. Global development following the industrial revolution and advances in technology (e.g., medicine, food production, and transportation) are highlighted as tangible benefits compared to “largely unvalidated [climate] models” (NP, Goklany, 151013). Other articles characterize fossil fuel reduction as “giving up prosperity.” This articulation attacks the negative framing of fossil fuels directly and re-frames them as wholly positive.

**5.4.2 Anti-regulation and anti-corporate liability claims.** Anti-regulation claims, in general, are not unique to the fossil fuel industry. Anti-regulation is a key tenet of the neo-liberalist ideology (Chomsky, 1999; Harvey, 2005) and is the primary goal of CTTs concerning all industry (Gutstein, 2018; Oreskes & Conway, 2010). Not surprisingly, anti-regulation claims in the data frame the debate in terms of neoliberalist ideology. Neoliberalism is both “a theory of political economic practices” (Harvey, 2005, p. 2) and a set of practices that may be applied differently depending on the context. Following Harvey (2005), there is neoliberalism ‘in theory’ and neoliberalism ‘in practice.’ The context of time and space ultimately determine how neoliberalist ideas and practices are carried out, meaning practice does not necessarily follow theory. The data depict various

neoliberalist positions that range from support of market mechanisms (as opposed to direct government intervention using policy) to a rejection of any intervention whatsoever – including the imposition of market mechanisms. G&M and C.D. Howe lean toward market mechanisms, to varying degrees. These ideas are in NP and Fraser as well. This likely alludes to the regional and factional differences of capital in Canada.

NP and Fraser contained a greater number of radical positions rejecting any form of government intervention. Neither the literature review nor the data can definitively account for this range; however, there is a clear correspondence between the political leanings of all four institutions and their positions on this matter. It is fair to speculate that these predispositions influence their relative positions on the neoliberalist spectrum.

The tendency for both newspapers to thematically frame their stories in ‘politics and policymaking’ and ‘economic and energy interests’ provides an amiable discursive framework for neoliberal claims. Debates between opposing policy positions are prominent in news articles, and commentary concerning them in opinion pieces. The focus on policy debates minimizes the role of impact scientists - and therefore their symbolic capital - seeking to express dire warnings about AGW. Further, solutions put forward to address AGW within these thematic frameworks, especially ‘economic and energy interests’, place strong emphasis on the economy first and foremost as the preferred pathway. It is within these frames that talking points such as “sustainable development” (whereby the fossil fuel economy can continue to grow while, simultaneously protecting the environment) are made sensible. The third way politics of PM Trudeau, PM Notley, and PM Clark, and the eco-modernization of governmentality, fail to provide a necessary counter to the hardline position of anti-regulation; instead,

they inadvertently legitimize the key concern of AR forces – the economy and wealth production – by subscribing to the framing of AGW in economic terms.

Anti-corporate liability claims are minimal. The few articles containing this claim discuss Volkswagen's manipulation of emissions tests, and the divestment movement. Regarding the latter, calls for institutions, unions, and pension funds to divest from fossil fuel industry are limited. Articles discussing divestment, are framed in economic terms, primarily as investment questions. There is little effort to defend polluters or discuss the reasoning behind calls for divestment; rather, the idea of divestment is attacked for its futility and poor financial reasoning. Bourdieu's (1998, p. 85) discussion of "disinterested acts" sheds light on this. In bracketing the discussion to "sound investments," AR forces depict a level of disinterestedness hinging on universal assumptions that are purposively devoid of normativity. That is, they deliberately avoid the moral arguments underlying the strategy of divestment. They effectively side-step the issue; producing (seemingly) credible counterarguments within the bracketed discourse, while maintaining their symbolic capital by portraying a sense of objective disinterestedness.

In the context of competing discourses of regulation, AR forces must provide justification for their anti-regulation positions on the issue. These vary considerably in Canadian newsprint and Fraser op-eds, and multiple approaches are often combined within the same article. The other AR claims - environmentalism as a threat to social progress, scientific uncertainty, and attempts to undermine opposing arguments using diversionary reframing – are used to buttress the anti-regulation contention. The two latter will now be discussed in turn.

**5.4.3 Diversionary reframing.** Diversionary reframing appeared in 39.7% of NP articles. The strategy, as outlined by Freudenburg (2005, p. 104), seeks to “divert attention away from an uncomfortable question by trying to reframe the debate as being ‘about’ something else.” Diversionary reframing serves as a useful tool for supporters of the fossil fuel industry in the difficult position of having to defend profits over the environment. Rather than debate RF concerns on their own terms within a pre-established framework, AR forces present RF arguments using their own preferred framework of understanding that is more conducive to counter-arguments. This often involves recontextualizing the debate to discuss issues that are tangential to the initial concerns by delimiting the framework of understanding, making it easier to avoid directly addressing RF claims.<sup>36</sup>

The debate over the KXL pipeline exemplifies this strategy. Proponents of the pipeline argue that shutting it down simply means that greater amounts of oil would be moved by rail car, which is more dangerous and carbon intensive. However, they fail to address the contention that any expansion of oil infrastructure accelerates AGW and that

---

<sup>36</sup> The addition of ‘divisionary reframing’ to the conceptual coding was found to be somewhat problematic for this study; however, this issue was not insurmountable, and the concept remains useful with the addition of clarification. The term, as used by Freudenburg (2006), refers to actors changing the subject rather than directly addressing uncomfortable topics or questions. Individuals and institutions divert attention by reframing the debate – often constructing issues as “non-problematic.” The power to engage in this discursive practice occurs through access to media; a privilege often reserved for the elite. The concept of diversionary reframing has influenced the conceptual construction of the anti-reflexivity thesis (see McCright & Dunlap, 2000, 2003, 2010). The four strategic AR claims drawn from Jacques et al. (2008) are forms of diversionary reframing. However, the decision to isolate diversionary reframing (as a code of its own) was made after the initial scan of the data. Sub-strategies of diversionary reframing were found outside of the four strategic AR claims. Interconnections among AR discursive strategies demonstrate the complicated nature of the subject and the nuance involved in discursive framing. Abstracting strategies out from the AR narratives is required to elucidate how they relate in constituting the deeply rooted underlying premises.

pipelines move significantly more oil than railcars. Shutting down, or preventing, pipelines effectively bottlenecks production.

Manipulation of numbers and language is another form of diversionary reframing in the data. Pipeline safety is touted as having a 99.999% safety record in moving 1.2 billion barrels of oil and close to three trillion cubic feet of natural gas per year. This sounds impressive, but 0.001% of 1.2 billion barrels of oil and three trillion cubic feet of natural gas is significant enough to cause major environmental harm. Beyond this, the safety record is tangential to the overriding concern of increased fossil fuel exploitation. Focusing on the safety record diverts attention away from the primary concern of AGW.

Diversionary reframing in the data also includes the contention that climate concerns are simply proxies. Environmentalists are accused of establishing a ‘climate change industry,’ and the motivations of sympathetic politicians are explicitly questioned. These ad hominem attacks have been noted in the literature (McCright & Dunlap, 2000). Knight and Greenberg (2011) conceptualize this as adversarial framing; the practice serves to delineate distinctions between opposing groups, and “make the oppositions, identity, goals, and tactics part of the issue by denouncing and discrediting [the opposition] as dangerous and extreme” (p. 327). Reframing the issue using this strategy redirects attention away from the fossil fuel industry and constructs a narrative depicting two *equally powerful* opposing forces. This conceals the substantial disparity of financial resources, media access, and political influence that exists between the fossil fuel industry and environmentalists (Lahsen, 2005, p. 155).

Fraser and NP both contain passages claiming that reducing emissions is futile, considering Canada’s miniscule share compared to other major emitters, such as China.

It is true that Canadian emissions account for 1.5-2.0% of global emissions, but this fact alone, without context, provides a false narrative that supports continued exploitation. Canada has less than 40 million people while China's population is close to 1.4 billion. Canada is one of the world's highest per-capita GHG emitters (World Bank, 2017), and the oil sands are among the most carbon intensive fossil fuel exploitation operations (Brandt et al., 2015). This form of reframing is highly effective for actors seeking justification for continued exploitation and for creating a social environment of organized irresponsibility (Murphy, 2015). Global flows of materials and wealth are nuanced and extremely complicated. Diverting attention away from Canadian activities by refocusing attention on relationships too complicated to delineate in soundbites places academics, sympathetic politicians, and environmentalists in the difficult position of having to explain processes that most individuals do not have the educational background to fully appreciate. Further, this diversion activates pre-existing biases, heuristic devices, and established cultural cognition sympathetic to the system of fossil fuel capital (Kahan, Braman, Gastil, Slovic & Mertz, 2007).

**5.4.4 Scientific uncertainty.** 'Scientific uncertainty' is in 21% of NP articles. This strategic claim is utilized less than all others, except for 'other problems' category. These claims are relegated to Fraser and the opinion sections of NP.<sup>37</sup> Furthermore, only 17 of the 87 NP authors have scientific uncertainty in their articles, with just over 40% of all uncertainty claims written by 3 authors: Peter Foster (10), Terence Corcoran (5), and

---

<sup>37</sup> Opinion sections: comments (23), issues and ideas (7), letters (2) - contained 76.2% of the articles with these claims.

Rex Murphy (4).

Use of this strategy in Canada mirrors that of the U.S - the primary goal is to undermine the legitimacy of impact science (Jacques et al., 2008; McCright & Dunlap, 2010). A rejection of scientific literature and claims of uncertainty amongst scientists are both present, and sometimes combined. Uncertainty claims are followed by accusations of corruption in the scientific community (e.g., “scientists falling into line for funding”), misrepresented scientific findings, and fabrications of scientific positions. AR writers often use sarcasm to undermine the credibility and concerns of scientists, politicians, and environmentalists, and utilize buzzwords, such as alarmist and climate zealots, as labels within a discourse of rejection and disdain. These attacks represent another example of ‘adversarial framing’ – whereby name-calling and finger pointing are used to define the ‘antagonists.’ Additionally, this tactic constructs group identity, relative to an “other,” and frames the issue to reflect its preferred ideological position.

These hardline denier positions are not common in Canada and it is fair to speculate that only a minority of Canadians accept them. However, they fulfill an AR purpose beyond simply presenting a dichotomy of ‘deny’ or ‘accept.’ As Philip Mirowski (Cited in Gutstein, 2018: Location 807) states, “the purpose of denialism has been to quash all immediate impulses to respond to the perceived biosphere crisis...by seeding the marketplace of ideas with doubt and confusion.” The presence of AGW denial in a nationally-dispersed, widely-read newspaper (even in the comments, opinions, and issues and ideas sections) ‘seeds’ enough doubt to become part, however small, of the national discourse on AGW.

## 5.5 Conditions

As a reactionary movement, AR forces must address the dominant issues within a specific spatio-temporal context. The symbolic capital of individual and institutional proponents of AR is influenced by, and often predicated on, these conditions.

Consequently, AR discourse is unique to regions, countries and time periods. Currently in Canada (though not exclusively so), these conditions include the political economy of fossil fuel exploitation and export, the political positions of ruling parties (federally and provincially), and the political economy of the media.

**5.5.1 Anti-reflexivity in Canada.** AR theorists assert that the AR movement originated in the U.S. and has since moved into other countries. Canada was mentioned specifically (McCright & Dunlap, 2011b) and Dunlap and Jacques' (2013) study of CTT printing presses found that Fraser had published at least one AR book. Although no discourse analysis of newspapers has been conducted in Canada on AR, Young and Coutinho (2013) found that Stephen Harper's Conservative government had engaged in some of the AR strategies discussed here.

This thesis reveals a considerable amount of AR discourse in Canadian newspapers and evidence of at least one institutional form of AR (the Fraser Institute). However, one major deviation from the preceding literature was recognized: the role of manufacturing uncertainty. This strategy is present in the Canadian news articles but does not play the central role ascribed to it in previous studies of the U.S. (see Jacques et al., 2008). This finding aligns with the work of Young and Coutinho (2013) who determined that the previous federal government, led by Stephen Harper, frequently engaged in AR

strategies, but rarely promoted scientific uncertainty or scepticism regarding AGW.

Their finding alludes to a condition inhibiting the use of scepticism in Canada.

By the time the Harper government took power, the issue of AGW in Canada had been debated and discussed for over a decade. Previous governments (federal and provincial) formulated policies to address it, and the Kyoto Protocol had been ratified. Unlike the U.S. which had, and continues to have, elite politicians and media denying the science, the presence of, and growing risks connected to, AGW have been largely accepted in Canada, with the exception of those deniers commenting in opinion sections of the NP. Young and Coutinho (2013) argue that Harper's government engaged in various 'affirmation techniques' whereby AGW was publicly accepted but its meaning was socially constructed in a way that made it more amiable to their preferred ideological position. This insight helps elucidate the prominence of diversionary reframing in the data.

Diversionary reframing is present in 3% more NP articles than anti-regulation. This result is telling. Anti-regulation is the end-goal of AR and, as such, was expected to far exceed other claims. It was predicted that a majority of articles containing AR would have anti-regulation claims, likely supported by the other claims listed. The prominence of diversionary reframing in articles containing AR speaks to the political and economic conditions in Canada.

The symbolic capital of sceptical economists and policy analysts is at stake in a socio-cultural and political context that has largely accepted the impact science. That is not to say there are no individuals willing to express these views; the data clearly show they

exist. However, their numbers are limited, and their discourse of uncertainty is largely relegated to the various opinion sections of a conservative newspaper.

RF has a strong presence in Canadian discourse and has for some time. Diversionary reframing follows the affirmation techniques outlined by Young and Coutinho (2013), while shifting the framework of debate. Within these preferred frames, the claim of environmentalism as a threat to social progress serves to blunt the normative, value-based arguments put forward by environmental sympathizers that threaten DSP.

Arguments such as Canada's minuscule share of GHG emissions are paired with concern over job losses (due to environmental restrictions of fossil fuel infrastructure) to support an anti-regulation stance while still providing plausible deniability against accusations of anti-environmental sentiment. Further still, environmentalists are labelled anti-democratic, anti-growth, and anti-everything "beneficial" for society – for the purposes of undermining their concerns and (fundamentally) drawing symbolic capital away from them. This does not stop RF; rather, it likely serves to slow its progression.

**5.5.2 Political economy.** Historically the Canadian economy has been highly dependent on the extraction and export of fossil fuels, and this remains true today (Doern et al., 2015; Macdonald, 2008; Nikiforuk, 2010; Simpson et al., 2007; Taft, 2017). The previous ruling federal party, led by Stephen Harper, was emphatically pro-oil, and envisaged Canada as an emerging 'energy superpower' (Young & Coutinho, 2013). The current ruling Liberal party continues to support the expansion of oil exploitation, but to a lesser degree. For instance, PM Trudeau supported the KXL pipeline during his campaign (GM, Chase & Jones, 150923), and recently had the government purchase the Trans-mountain pipeline from Kinder Morgan for \$4.5 billion after the company

threatened to shut down the project (Meissner, 2018). Canada is the fourth largest producer and the fourth largest exporter of oil in the world, with 96% of Canada's proven oil reserves in the oil sands and 96% of exports going to the U.S. (Government of Canada, 2018). Efforts to get landlocked oil and natural gas to Asian markets have been proposed and attempted, and continue to be divisive (e.g., the Trans-mountain pipeline).

The issue of AGW was first raised publicly in the 1980s by the Mulroney Government and has been publicly discussed and debated since. A wide variety of policies, both federal and provincial, have been constructed to address this problem, with minimal success in reducing GHG emissions. Canada has a poor track record on emissions relative to other wealthy countries (Stoddart et al., 2016). PM Trudeau's carbon tax, which came into effect at the beginning of 2019, is the first federally-mandated program to put a price on carbon.

The third way politics espoused by leaders Trudeau, Notley, and Clark, and those claims alluding to the eco-modernization of governmentality demonstrate the influence of Canada's political economy (as a condition) on the manifestation of AR discourse generated by AR forces. The economy's strong dependence on fossil fuels combined with the recognition that AGW is a serious problem conditions the form of AR discourse espoused in the media. Claims of scientific uncertainty are rare compared to diversionary reframing. This approach allows AR forces to maintain their legitimacy (in some quarters at least) while still challenging RF efforts to address the issue of AGW.

**5.5.3 Canadian media.** The media 'mediate' the construction of social issues (Carvalho, 2010; Stoddart et al, 2017) and journalistic norms determine what issues are covered and how (Boykoff & Boykoff, 2004, 2007). Ownership of Canada's mass media

is highly concentrated and investigative journalism has experienced significant cutbacks in funding, beginning in the 1990s (Brownlee, 2005). Murphy (2015) demonstrates how Canadian news undermines the concerns of impact science, while socially constructing quiescence toward AGW (p. 331). AGW is banalized through superficial coverage of it (Young & Dugas, 2011) and while the amount of media coverage of AGW varies, the discussion tends to remain general, with few concrete solutions put forward (Stoddart et al., 2016).

Canadian newspapers devote more stories to AGW than those of other countries (Good, 2008). Still, the banalization of the subject combined with the social construction of quiescence towards it signals (at the very least) a cautious media seemingly unwilling to depict the full extent of AGW risks and the social and economic changes required to avoid the worst-case scenarios. The increasingly concentrated control over Canadian news-media by a relatively few number of elites, in combination with the always present profit motive conditions the manifestation of AGW discourse. In this socio-cultural environment, third way politics remain the safest way to address the issue in print and AR discourse leans into diversionary reframing and anti-regulatory messages and opposed to claims of uncertainty.

## **5.6 Conclusion**

A direct connection between CTTs and Canadian newspapers cannot not be established in this study. However, the strategic claims of AR are present, to varying degrees, in both Canadian newspapers. This finding and the specific form of AR claims demonstrate that AR ideas formed in CTTs have spread to Canada's mainstream media. AR discourse and RF discourse are not absolute categories, definitively representing one position or

another; rather, they exist on a spectrum. This spectrum represents a diversity of views and opinions, which are themselves informed by the social, political, economic, and cultural positions of the individuals expressing them. It is argued here that DSP is the underlying structure of AR discourse, with the AR generative mechanism perpetuating its existence. This assertion is not meant to reify DSP. DSP is a structure in the real domain, which is manifest through discursive and non-discursive practices of individuals and institutions with stakes in the fields of economics, politics, and culture.

The presence of AGW presents a threat to DSP. In responding to the risks of AGW, RF confronts the inherent contradictions of DSP, and it is within this context that the spectrum of views and opinions becomes a space of symbolic struggles over the construction of AGW. Symbolic capital becomes both a causal power and a liability of AR. The power to construct reality is dynamic, and its possession is dependent on other mechanisms (conditions). Actors and institutions seeking to present their narrative engage in various discursive strategies, simultaneously employing symbolic capital while seeking to increase their share of it relative to others. The stakes of this symbolic struggle could not be higher. The fossil fuel industry has much to lose, as do the rest of us.

## Chapter 6: Conclusion

The internal and necessary relationship between energy use and continuous growth ('growth' as defined by the dominant social paradigm (DSP) becomes especially problematic when increased energy use threatens ecological systems on a global scale. Reflexive modernization precedes, and eventually manifests concretely in, the reflective practices of impact science, environmental activism, and government policies to address this threat (McCright, Marquart-Pyatt, Shwom, Brechin, & Allen, 2016). The environment has undoubtedly been a subject of concern, in one way or another, for centuries, and pinpointing the precise moment that reflexive modernization manifests reflectively as recognizable widespread concern, following modernism specifically, is not feasible. However, there are clear points in history that represent significant change: Rachel Carson's publication of the book *Silent Spring* in 1962 (McCright, Dentzman, Charters, & Dietz, 2013); and revelations about the extent of ozone depletion, tropical rainforest destruction, and the Exxon Valdez oil spill in the 1980s are a few such examples. Impact science increased throughout the 1970s into the 1980s and international institutions were formed to support AGW science and address its findings – most notably The Brundtland Commission in 1987, the IPCC in 1988, and the formation of the United Nations Framework on Climate Change in Rio in 1992 (Dunlap, 1997).

Anti-Reflexive (AR) forces seek to protect the pre-existing order of modernity and capitalism from these institutional threats, and other concrete manifestations arising within (and through) the context of reflexive modernization (Dunlap & Jacques, 2013). They see their purpose as a need “to defend the culture of productivism and consumerism at all costs, because the logic of profit-making, at the source of the market

economy, and the pursuit of mass consumption, the bedrock of social stability, rests on the premise of using nature as a resource rather than as our living environment” (Castells, 2009, p. 305). Discursive strategies for resisting reflexive modernization, specifically against movements regarding AGW, were largely developed prior to the threats of reflexive modernization within pre-established CTTs. These were originally set up to promote neoliberal, and libertarian ideologies favoring, and favored by, the wealthy (Brulle, 2014; Hogan & Littlemore, 2009; Mayer, 2014; McCright & Dunlap, 2010; Oreskes & Conway, 2011). AGW denial in CTTs originated in the U.S and spread to other English-speaking countries (Tindall, Stoddart, Callison, 2018). During the 1980s and 1990s, CTTs recognized the need undermine impact science and sow doubt (i.e., manufacture uncertainty), using methods similar to the tobacco wars, prior.

This exploratory thesis has shown the presence of AR and its role in Canadian news-media. It further confirms that the Fraser disseminates AR discourse resembling, but not identical to, that of American CTTs. Canada’s social, political, and economic conditions make it an interesting case study of AR. The country has a long history of exporting raw staples, first to Britain, and then to the U.S. Also notable are the significant differences between the Western and the Eastern economies in Canada. The West relies heavily on the exploitation and export of its natural resources, while the East produces more value through manufacturing. These sectors and class fractions are often at odds with one-another. Studies of political-economy in Canada depict two ruling classes: mercantile-financial entrepreneurs and industrial-capitalist entrepreneurs (Naylor, 1972). This provides insight into the significant differences between the C.D. Howe and Fraser. The

two think tanks seem to be expressing ideas preferable to regional elites, which often conflict with one-another. More research into these differences is required.

Canada's news-media contains substantially more RF than AR. However, RF primarily consists of market-based solutions to AGW. This 'third-way' assuages concern, by presenting the illusion of change, while simultaneously maintaining, and promoting, the economic system and underlying structure responsible for AGW in the first place. For instance, a range of efforts to reduce GHG are supported, but these positions are often qualified by economic concerns. A discourse of sustainable growth is promoted whereby continued expansion of fossil fuel exploitation, use, and export can co-exists with efforts to reduce GHG emissions.

On the other side of the spectrum, RF discourse is often presented by conservative voices in their efforts to undermine it. AR claims are found throughout National Post and are dominant in Fraser. Anti-regulation and diversionary reframing both play prominent roles in AR discourse. Although scientific uncertainty claims are present, they are relegated to Fraser op-eds and the opinion sections in National Post. These findings reflect the specific socio-historical and political conditions in Canada that influence the symbolic struggle over AGW discourse.

### **6.1 Further Research into a Wicked Problem**

The research conducted here is part of a larger vision to develop a framework for elucidating public inaction toward AGW. This is a 'wicked problem,' constituted by a wide variety of interacting mechanisms. These include, but are not limited to: temporal and spatial conditions (Beck, 1992; Giddens, 1990); individual proximity to, and personal experience with, physical manifestations of AGW (Borick & Rabe, 2010;

Hamilton and Keim, 2009; Krosnick, Holbrook, Lowe & Visor, 2006); characteristics of the knowledge transmitter - the medium (e.g., newspaper), organization (e.g., Greenpeace), or individual (e.g., Al Gore) (Antilla, 2010; Dunlap & Jacques, 2013; Hmielowski, Feldman, Myers, Leiserowitz & Maibach, 2014; Murphy, 2015); cognitive and affective characteristics of the perceiver (Baron, Earhard & Ozier, 2006; Kahan, Jenkins-Smith, & Braman, 2011; Leiserowitz, 2006); group affiliation and shared culture (Brulle et al, 2012; Brulle & Dunlap, 2015; Gauchat, 2012; Kahan et al, 2012; McCright, Dentzman, Charters & Dietz, 2013); individual trust in science (Leiserowitz, 2007; Leiserowitz, Maibach, Roser-Renouf, Smith & Dawson, 2012); and the role of AR stakeholders in defining, defending, and promoting their interests (Dunlap, 2014; Dunlap & Jacques, 2013; McCright & Dunlap, 2010, 2011a, 2011b; Young & Coutinho, 2013).

Figure 3 presents a working model of interacting mechanisms; these were drawn from the wide-ranging literature on public perception of AGW (cited above). The socio-historical context refers to conditions that influence specific manifestations of other mechanisms (shown in the bubbles). The influential role of temporal and spatial conditions in struggles of symbolic capital were considered briefly in this thesis. These mechanisms operate across micro, meso, and macro levels, and influence all forms of capital.<sup>38</sup>

Both media transmission (e.g., thematic frames, journalistic sources and so on) and symbolic capital were analysed to varying degrees in this thesis. Newspapers still

---

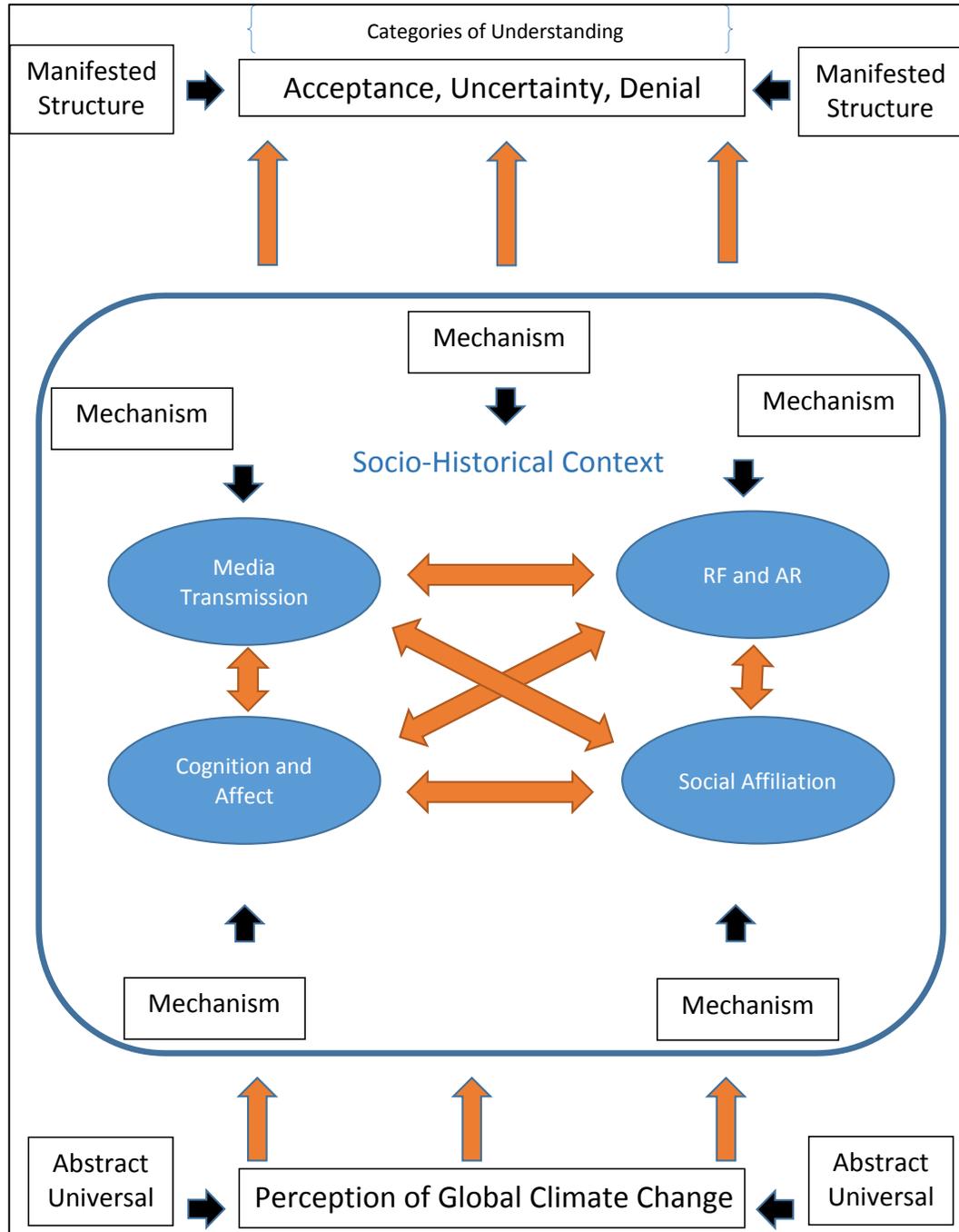
<sup>38</sup> At this point in the larger project it seems most efficacious to consider their relative influence on each of the mechanisms individually, due to their infinite complexity in an open system.

maintain their role as important purveyors of news to the public despite their recent regression (Stoddart et al., 2016). Alternative forms of online media, television, and entertainment continue to draw source material from these institutions but present the information in novel ways, and often attach various forms of commentary. The role of these alternative forms of media in shaping climate change discourse should be addressed in future research.

Symbolic capital is conceptualized as a causal power of AR forces, granting them influence over AGW discourse, in general, and AF discourse, specifically. This conceptualization, however, is limited to media access and by competing groups. Symbolic capital also influences, and is influenced by, social affiliation, and cognition and affect. As research proceeds to address these other mechanisms, symbolic capital will need to be revisited to explore that dynamic as well.

Literature on social affiliation demonstrates and describes the important role it plays in the perception of AGW. The cultural cognition thesis asserts that individual perceptions of AGW are guided by values and beliefs rooted in cultural affiliation (Kahan et al., 2012). This approach bridges the gap between sociology and social psychology. Psychology highlights the role of cognition and affect, which cannot be left out of a holistic understanding of perception; however, this is influenced by group-oriented values and beliefs. This brief delineation of public perception demonstrates the immense complexity of the elucidating generative mechanisms of inaction.

*Figure 3 - Structure of Inaction*



## 6.2 Limitations of this Study

There are limitations to this study worth noting, apart from the questions raised above. First, only two newspapers were analysed, and both are published in eastern Canada. They were selected for their national distribution and are useful in capturing broad ideas and narratives; however, it would be advantageous to analyse local newspapers to understand regional differences, especially considering the significant differences in resource development, energy systems, and political preferences between eastern and western Canada. Also, as mentioned above, research here was limited to newspapers. While they continue to hold an important position in news production, their role has changed dramatically with increased internet use and reliance. Understanding how news travels from prominent purveyors, such as the Globe and Mail and National Post, to televised news-media and the various internet-based forms is an important avenue of future research. The global reach of online access sees a pluralistic amalgamation of beliefs and worldviews on AGW which complicates the role of Canadian news-media. Still, this thesis shows that local issues (such as pipeline infrastructure) maintain a prominent role in local discourse, demonstrating the importance of recognizing ideographic and nomothetic factors.

Second, this thesis draws on social movement literature, but only engages with its surface material, opting instead to frame the problem through Bourdieu's theory of practice. The literature on social movements is vast (for example, see McAdam & Snow, 2010) and would provide useful insights into the symbolic struggles discussed here. Further, the thesis only considered the role of RF forces as they relate to AF forces. RF social movements are well studied in the U.S and elsewhere, but a thorough review of

the literature on their role in Canada is beyond the scope of this work. Future research should consider the role of RF forces in Canada, apart from their struggles with AR forces.

Further, according to CR, abstraction should draw the widest variety of frameworks possible to find the best fit of all possible approaches. Despite the diverse set of theoretical frameworks applied here, there are many others that would provide additional, and likely unique, insight into AR discourse in Canadian news-media: Gramscian hegemony, Habermassian life worlds, and Giddens' structuration are a few that could be fruitfully utilized.

Third, the concept of 'AR' was used as a broad, undifferentiated category. This was deemed necessary to remain within the scope of research. The political positions and economic interests of actors and institutions in Canada, however, is multifarious, consisting of different regional and class factions that maintain distinct positions on other issues. Grouping them together into the broad category of AR conceals important differences. These differences need to be explored in future research.

### **6.3 The Last Word**

The legitimacy for constructing AGW narratives is gained through symbolic struggles between competing groups. These competitions have real-world consequences for the future. Dire warnings expressed by scientists are continually challenged by AR forces seeking to maintain an unsustainable status-quo. The hour is late, and time is running out to address the crisis of AGW. Delineating the strategies of AR forces is a necessary first step in transcending them.

## References

- Ahchong, K. & Dodds, R. (2012). Anthropogenic climate change coverage in two Canadian newspapers, the Toronto Star and the Globe and Mail, from 1988 to 2007. *Environmental Science and Policy*, 15, 48-59. doi:10.1016
- Altheide, D. L. (1987). Ethnographic content analysis. *Qualitative Sociology*, 10(1), 65-77.
- Amend, E, & Barney, D. (2016). Getting it right: Canadian conservatives and the war on science. *Canadian Journal of Communication*, 41, 9-35.
- Anderegg, W.R., Prall, J.W., Harold, J., Schneider, S.H. (2010). Expert credibility in climate change. *Proceedings of the National Academy of Sciences of the United States of America*, 107(27), 12107-12109.
- Anderson, A. (2009). Media, politics and climate change: Towards a new research agenda. *Sociology Compass*, 3(2), 166-182. doi: 10.1111/j.1751-9020.2008.00188.x
- Antilla, L. (2005). Climate of scepticism: US newspaper coverage of the science of climate change. *Global Environmental Change*, 15, 338-352.  
doi:10.1016/j.gloenvcha.2005.08.003
- Antilla, L. (2010). Self-censorship and science: A geographical review of media coverage of tipping points. *Public Understanding of Science*, 19(2), 240-256.
- Archer, M., Decoteau, C. Gorski, P., Little, D., Porpora, D., Rutzou, T,...Vandenberghe, F. (2016). What is critical realism. Retrieved from <http://www.asatheory.org/current-newsletter-online/what-is-critical-realism>.
- Austin, A. (2002). Advancing accumulation and managing its discontents: The U.S. antienvironmental countermovement. *Sociological Spectrum*, 27, 71-105.

- Baron, R. A., Earhard, B., & Ozier, M. (2001). *Psychology* (3<sup>rd</sup> ed.). Toronto, ON: Pearson Education Canada Inc.
- Batie, S.S. (2008). Wicked problems and applied economics. *American Journal of Agricultural Economics*, 90(5), 1176-1191. <https://doi.org/10.1111/j.1467-8276.2008.01202.x>
- Beck, U. (1992). *Risk society: Towards a new modernity*. Newbury Park, CA: Sage Publications Inc.
- Beck, U. (1994). The reinvention of politics: Towards a theory of reflexive modernization. In U. Beck, A. Giddens, & S. Lash (Eds.), *Reflexive modernization* (1-55). Stanford, CA: Stanford University Press.
- Beck, U., Bonss, W., & Lau, C. (2003). The theory of reflexive modernization: Problematic, hypothesis and research programme. *Theory, Culture & Society*, 20(2), 1-33.
- Benford, R.D. & Snow, D.A. (2000). Framing processes and social movements: An overview and assessment. *Annual Review of Sociology*, 26, 611-639.
- Bengtsson, M. (2016). How to plan and perform a qualitative study using content analysis. *Nursing Open*, 2, 8-14.
- Bhaskar, R. (2008). *A realist theory of science*. New York, NY: Routledge.
- Borick, C., & Rabe, B., (2010). A reason to believe: Examining the factors that determine individual views on global warming. *Social Science Quarterly*, 91 (3), 777-800.
- Bourdieu, P. (1998). *Practical reason*. Stanford, CA: Stanford University Press.

- Boykoff, M. (2011). *Who speaks for the climate: Making sense of media reporting on climate change*. Cambridge: Cambridge University Press.
- Boykoff, M. & Boykoff, J.M. (2004). Balance as bias: Global warming the US prestige press. *Global Environmental Change, 14*, 125-136.
- Boykoff, M. & Boykoff, J.M. (2007). Climate change and journalistic norms: A case study of US mass-media coverage. *Geoforum, 1190-1204*.
- Boykoff, M.T. & Yulsman, T. (2013). Political economy, media, and climate change: Sinews of modern life. *WIREs Clim Change, 4*, 359-371. doi: 10.1002/wcc.233
- Brandt, A.R., Sun, Y., Bharadwaj, S., Livingston, D., Tan, E., & Gordan, D. (2015). Energy return on investment (EROI) for forty global oilfields using a detailed engineering-based model of oil production. *PLoS One, 10(12)*.  
doi:10.1371/journal.pone.0144141
- Brean, J. (2017, April 21). Ruling against National Post writers in defamation suit by prominent climate scientist overturned. *National Post*. Retrieved from <https://nationalpost.com/news/canada/ruling-against-national-post-writers-in-defamation-suit-by-prominent-climate-scientist-overturned>
- Broadbent, J., Sonnett, J., Botetzagias, I., Carson, M., Carvalho, A., Chien, Y., Edling, C., ...Zehengyi, S. (2016). Conflicting climate change frames in a global field of media discourse. *Socius, (2)*, 1-17.
- Brownlee, J. (2005). *Ruling Canada: Corporate cohesion and democracy*. Halifax, NS: Fernwood Publishing.

- Brulle, R.J. (2014). Institutionalizing delay: Foundation funding and the creation of U.S. climate change counter-movement organizations. *Climatic Change*, *122*, 681-694. doi 10.1007/s10584-013-1018-7
- Brulle R. J., Carmichael J., & Jenkins, J. C. (2012). Shifting public opinion on climate change: An empirical assessment of factors influencing concern over climate change in the U.S., 2002-2010. *Climatic Change*, *144*, 169-188.
- Brulle, R. J., & Dunlap, R.E. (2015). Sociology and global climate change. In R.E. Dunlap & R.J. Brulle (Eds.). *Climate change and society: Sociological perspectives* (pp. 1-31). New York, NY: Oxford University Press.
- Burla, L., Knierim, B., Jurgen, B., Liewald, K., Duetz, M., Abel, T. (2008). From text to codings: Intercoder reliability assessment in qualitative content analysis. *Nursing* *57* (2), 113-117.
- Canada Revenue Agency (2018). Charities listings. Retrieved from <https://apps.cra-arc.gc.ca/ebci/haip/srch/t3010form22quickview-eng.action?&fpe=2017-12-31&b=119233823RR0001>
- Canadian Center for Policy Alternatives. (2013). *The bitumen cliff: Lessons and challenges of bitumen mega-developments for Canada's economy in an age of climate change*. Calgary, AB: Clarke, T., Gibson, D., Haley, B., Stanford, J
- Canadian Association of Petroleum Producers. (2014). *The facts on the oil sands*. Retrieved from <http://appstore.capp.ca/oilsands/page/canadas-energy-2012-01-23-02-01-48>

- Carmichael, J.T. & Brulle, R.J. (2016). Elite cues, media coverage, and public concern: An integrated path analysis of public opinion on climate change, 2001-2013. *Environmental Politics*, 26(2), 232-252 doi: 10.1080/09644016.2016.1263433
- Carroll, William K. (2010). *Corporate power in a globalizing world*. Toronto, ON: Oxford University Press.
- Carvalho, A. (2005). Representing the political of the greenhouse effect: Discursive strategies in the British media. *Critical Discourse Studies*, 2(1) 1-29. doi: 10.1080/17405900500052143
- Carvalho, A. (2007). Ideological cultures and media discourses on scientific knowledge: Re-reading news on climate change. *Public Understanding of Science*, 16, 223-243. doi: 10.1177/0963662506066775
- Carvalho, A. (2010). Media(ted) discourses and climate change: A focus on political subjectivity and (dis)engagement. *WIREs Climate Change*, 1, 172-179. doi: 10.1002/wcc.13
- Castells, M. (2009). *Communication power*. New York, NY: Oxford University Press.
- CBC (2015, February 9). Climate scientist Andrew Weaver wins defamation suit against National Post. *CBC*. Retrieved from <https://www.cbc.ca/news/technology/climate-scientist-andrew-weaver-wins-defamation-suit-against-national-post-1.2950286>
- CBC (2019, January 1). Andrew Sheer begins new year with warning of skyrocketing carbon taxes. Retrieved from <https://www.cbc.ca/news/canada/saskatchewan/andrew-scheer-carbon-tax-1.4962938>
- C.D. Howe Institute. (2014). History. Retrieved from <https://www.cdhowe.org/history>

- Chomsky, N. (1999). *Profit over people: Neoliberalism and the global order*. Toronto, ON: Seven Stories Press.
- Comfort, S.E. & Park, Y.E. (2018). On the field of environmental communication: A systematic review of the peer-reviewed literature. *Environmental Communication*, 12(7), 862-875.
- Conference Board of Canada (2011). Greenhouse gas emissions: International Rating. Retrieved from <http://www.conferenceboard.ca/hcp/details/environment/greenhouse-gas-emissions.aspx>
- Cook, J., Nuccitelli, D., Green, S. A., Richardson, M., Winkler, B., Painting, R., ... & Skuce, A. (2013). Quantifying the consensus on anthropogenic global warming in the scientific literature. *Environmental research letters*, 8(2), 024024
- Danermark, B., Ekstrom, M., Jakobsen, L., & Karlsson, J. Ch. (2002). *Explaining society: Critical realism in the social sciences*. New York, NY: Routledge
- Davidson, D. J. & Gismondi, M. (2011). *Challenging legitimacy at the precipice of energy calamity*. New York, NY: Springer.
- Dispensa, J.M. & Brulle, R. J. (2003). Media social construction of environmental issues: Focus on global warming – a comparative study. *International Journal of Sociology and Social Policy*, 23(10): 77-105. <http://dx.doi.org/10.1108/01443330310790327>
- Djerf-Pierre, M. (2011). Green metacycles of attention: Reassessing the attention cycles of environmental news reporting 1961-2010. *Public Understanding of Science*, 22(4), 495-512. doi: 10.1177/0963662511426819

- Doern, B.G., Auld, G., & Stoney, C. (2015). *Green-Lite: Complexity in fifty years of Canadian environmental policy, governance, and democracy*. Montreal, QU: McGill-Queen's University Press.
- Doran, P. T., & Zimmerman, M. K. (2009). Examining the scientific consensus on climate change. *Eos, Transactions American Geophysical Union*, 90(3), 22-23.
- Douglas, R. (2007). Growthism and the green backlash. *The Political Quarterly*, 78(4), 547-555.
- Downs, A. (1972). Up and down with ecology: The 'issue-attention cycle'. *Public Interest*, 28, 38-50.
- Dunlap, R. (1997). The evolution of environmental sociology: A brief history and assessment of the American experience. In M. Redclift & G. Woodgate (Eds), *The international handbook of sociology* (pp. 21-39). Cheltenham, UK: Edwar Elgar Publishing.
- Dunlap, R. (2014). Clarifying anti-reflexivity: Conservative opposition to impact science and scientific evidence. *Environmental Research Letters*. 9, 1-4. doi: 10.1088/1748-9326/9/2/021001
- Dunlap, R., & Jacques, P. L. (2013). Climate change denial books and conservative think tanks: Exploring the connection. *American Behavioural Scientist*, 57(6), 699-731. doi: 10.1177/0002764213477096
- Dunlap, R. E. & McCright, A. M. (2008). A widening gap: Republican and Democratic views on climate change. *Environment: Science and Policy for Sustainable Development*, 50(5), 26-35. doi: 10.3200/ENVT.50.5.26-35

- Dunlap, R. E., & McCright, A.M. (2015). Challenging climate change: The denial countermovement. In R.E. Dunlap & R.J. Brulle (Eds.). *Climate change and society: Sociological perspectives* (pp. 300-332). New York, NY: Oxford University Press.
- Dunlap, R. & Van Liere, K.D. (1984). Commitment to the dominant social paradigm and concern for environmental quality. *Social Science Quarterly* 65, 1013-1028
- Elsasser, S.W. & Dunlap, R.E. (2013). Leading voices in the denier choir: Conservative columnists' dismissal of global warming and denigration of climate science. *American Behavioral Scientist*, 57(6), 754-776. doi: 10.1177/0002764212469800
- Entman, R.M. (1993). Framing: Toward clarification of a fractured paradigm. *Journal of Communication*, 43(4), 51-58.
- Farrell, J. (2016). Corporate funding and ideological polarization about climate change. *Proceedings of the National Academy of Sciences*, 113(1), 92-97.
- Fast, T. (2014). Stapled to the front door: Neoliberal Extractivism in Canada. *Studies in Political Economy*, 94(1), 31-60. doi: 10.1080/19187033.2014.11674953
- Financial Post (2018). Author profile: Lawrence Solomon. *Financial Post*. Retrieved from <https://business.financialpost.com/author/lawrencesolomon>
- Fletcher, A. (2017). Applying Critical Realism in Qualitative Research. *International Journal of Social Research Methodology*, 20(2), 181-194. doi: 10.1080/13645579.2016.1144401
- Ford, J. D, & King, D. (2015). Coverage and framing of climate change adaptation in the media: A review of influential North American newspapers during 1993-2013. *Environmental Science & Policy*, 137-146.

- Foster, J.B. & Clark, B. (2015). Crossing the river of fire: The liberal attack on Naomi Klein and This Changes Everything. *Monthly Review*, 66(9), 1-17.
- Fraser Institute (n.d.). Board of directors. Retrieved December 7, 2018 from:  
<https://www.fraserinstitute.org/about/directors>
- FraserInstitute.Org - A (n.d.). Profile: Kenneth P. Green. Retrieved from  
<https://www.fraserinstitute.org/profile/kenneth-p-green>
- FraserInstitute.Org - B (n.d.). Profile: Ross McKittrick. Retrieved from  
<https://www.fraserinstitute.org/profile/ross-mckittrick>
- Freudenburg, W. R. (2005). Privileged access, privileged accounts: Toward a socially structured theory of resources and discourses. *Social Forces*, 84(1), 89-114.
- Freudenburg, W.R. (2006). Environmental degradation, disproportionality, and the double diversion. *Rural Sociology*, 71(1), 3-32.
- Gamson, W.A. & Modigliani, A. (1989). Media discourse and public opinion on nuclear power: A constructionist approach. *Journal of Sociology*, 95(1), 1-37.
- Gauchat, G. (2012). Politicization of science in the public sphere: A study of public trust in the United States, 1974 to 2010. *American Sociological Review*, 77(2), 167-187.  
doi: 10.1177/0003122412438225
- Giddens, A. (1990). *The consequences of modernity*. Stanford, CA: Stanford University Press.
- Goffman, E. (1974). *Frame analysis: An essay on the organization of experience*. New York, NY: Harper Colophon.
- Gorski, P.S. (2013). What is critical realism? And why should you care? *Contemporary Sociology*, 42(5), 658-670. doi: 10.1177/0094306113499533

- Good, J.E. (2008). The framing of climate change in Canadian, American, and international newspapers: A media propaganda model analysis. *Canadian Journal of Communication, 33*(2), 233-255.
- Government of Canada (2018). Natural Resources Canada: Crude oil facts. Retrieved from: <https://www.nrcan.gc.ca/science-and-data/data-and-analysis/energy-data-and-analysis/energy-facts/crude-oil-facts/20064>
- Greenberg, J., Knight, G. & Westersund, E. (2011). Spinning climate change: Corporate and NGO public relations strategies in Canada and the United States. *The International Communication Gazette, 73*(1-2), 65-82. doi: 10.1177/1748048510386742.
- Grundmann, R. (2007). Climate change and knowledge politics. *Environmental Politics, 16*(3), 414-432. doi: 10.1080/09644010701251656
- Grundmann, R. & Scott, M. (2014). Disputed climate science in the media: Do countries matter? *Public Understanding of Science, 23*(2), 220-235. doi: 10.1177/0963662512467732
- Gutstein, D. (2018). *The big stall: How big oil and think tanks are blocking action on climate change in Canada* [Kindle version]. Toronto, ON: James Lorimer & Company Ltd. Retrieved from Amazon.com
- Hamilton, L. C., & Keim, B. D., (2009). Short communication: Regional variance in perceptions about climate change. *International Journal of Climatology, 29*, 2248-2352. doi: 10.1002/joc.1930
- Harrison, K. & Sundstrom, L.M. (2007). Introduction: The comparative politics of climate change. *Global Environmental Politics, 7*(4), 1-18.

- Harvey, D. (1992). *The condition of post-modernity: An enquiry into the origins of cultural change*. Maldon, MA: Blackwell Publishers.
- Harvey, D. (2005). *A brief history of neoliberalism*. New York, NY: Oxford University Press
- Harvey, D. (2014). *Seventeen contradictions and the end of capitalism*. New York, NY: Oxford University Press.
- Herrick, C. N., & Jamieson, D. (2001). Junk science and environmental policy. *Phil. Public Policy Q*, 21 (2-3), 11–6.
- Hmielowski, J. D., Feldman, L., Myers, T. A., Leiserowitz, A., & Maibach, E. (2014). An attack on science? Media use, trust in scientists, and perceptions of global warming. *Public Understanding of Science*, 23(7), 866-883. doi: 10.1177/0963662513480091
- Hogan, J., & Littlemore, R. (2009). *Climate cover-up*. Vancouver, BC: Greystone Books.
- Innis, H.A. (1979). The importance of staples products. In W.T. Easterbrook & M.H. Watkins (Eds.), *Approaches to Canadian economic history*. (16-19). Toronto, ON: Macmillan.
- IPCC (2014A). *Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland, 151 pp
- Jacques, P.L. (2006). The rearguard of modernity: Environmental skepticism as a struggle of citizenship. *Global Environmental Politics*, 6(1), 76-101.

- Jacques, P. L., Dunlap, R. E., Freeman, M. (2008). The organisation of denial: Conservative think tanks and environmental scepticism. *Environmental Politics*, 17(3), 349-385. doi: 10.1080/09644010802055576
- Jorgensen, M., & Phillips, L. (2002). *Discourse analysis as theory and method*. Thousand Oaks CA: Sage.
- Kahan, D. M., Braman, D., Gastil, J. Slovic, P. & Mertz, C.K. (2007). Culture and identity-protective cognition: Explaining the white-male effect in risk perception. *Journal of Empirical Legal Studies*, 4(3), 465-505.
- Kahan, D. M., Jenkins-Smith, H., & Braman, D. (2011). Cultural cognition of scientific consensus. *Journal of Risk Research*, 14(2), 147-174. doi: 10.1080/13669877.2010.511246
- Kahan, D. M., Peters, M., Wittlin, M., Slovic, P., & Braman, D. (2012). The polarizing impact of science literacy and numeracy on perceived climate change risks. *Nature Climate Change*, 2, 732-750. Retrieved from [http://scholarship.law.gwu.edu/faculty\\_publications/265](http://scholarship.law.gwu.edu/faculty_publications/265).
- Katz-Rosene, R. M. (2016). From narrative of promise to rhetoric of sustainability A genealogy of the oil sand. *Environmental Communication*, 11(3), 1-14. doi: 10.1080/17524032.2016.1253597
- Krippendorff, K. (2004). *Content analysis: An introduction to its methodology (2nd ed.)*. London: Sage.
- Knight, G. & Greenberg, J. (2011). Talk of the enemy: Adversarial framing and climate change discourse. *Social Movement Studies*, 10(4), 323-340.

- Krosnick, J. A., Holbrook, A. L., Lowe, L., & Visser, P. S. (2006). The origins and consequences of democratic citizens' policy agendas: A study of popular concern about global warming. *Climatic Change*, 77: 7-43. doi: 10.1007/s10584-006-9068-8
- Lachapelle, E., Borick, C., Rabe, B.G. (2014). "Key finding report for the 2013 Canada – US comparative climate opinion survey." Canada 2020, Ottawa, ON. Retrieved 2015-03-25 from: <http://canada2020.ca/wp-content/uploads/2014/03/Canada-2020-Background-Paper-Climate-Poll-Key-Findings-March-3-2014.pdf>
- Lahsen, M. (2005). Technocracy, democracy, and U.S. climate politics: The need for demarcations. *Science, Technology, & Human Values*, 30(1), 137-169. doi: 10.1177/0162243904270710
- Leiserowitz, A. (2006). Climate change risk perception and policy preferences: The role of affect, imagery, and values. *Climatic Change*, 77, 45-72. doi: 10.1007/s10584-006-9059-9
- Leiserowitz, A. (2007). International public opinion, perception, and understanding of global climate change. United Nations Human Development Report Office.
- Leiserowitz, A., Maibach, E. W., Roser-Renouf, C., Smith, N., & Dawson, E. (2012). Climategate, public opinion, and the loss of trust. *American Behavioural Scientist*, 57(6), 818-837. doi: 10.1177/0002764212458272
- Lennox, R. & Jurdi-Hage, R. (2017). Beyond the empirical and the discursive: The methodological implications of critical realism for street harassment research. *Women's Studies International Forum*, 60, 28-38.

- Lester, L., & Hutchins, B. (2012). The power of the unseen: Environmental conflict, the media and invisibility. *Media, Culture & Society* 34(7), 847–863.  
doi:10.1177=0163443712452772
- Levson, K. (2015). Circulation report: Daily newspapers 2015. Retrieved from [http://newspaperscanada.ca/wp-content/uploads/2016/06/2015-Daily-Newspaper-Circulation-Report-REPORT\\_FINAL.pdf](http://newspaperscanada.ca/wp-content/uploads/2016/06/2015-Daily-Newspaper-Circulation-Report-REPORT_FINAL.pdf).
- Lewis, S. C. (2012). The tension between professional control and open participation: Journalism and its boundaries. *Information, Communication & Society* 15(6): 836-866.
- Lyotard, J. (1979). *The postmodern condition: A report on knowledge*. (G. Bennington & B. Massumi, Trans.). Minnesota, MN: University of Minnesota Press.
- Macdonald, D. (2008). Explaining the failure of Canadian climate policy. In H. Compston & I. Bailey (Eds.), *Turning down the heat: The politics of climate policy in affluent democracies*. (223-240). New York, NY: Palgrave Macmillan.
- Mackintosh, W.A. (1979). Economic factors in Canadian history. In W.T. Easterbrook & M.H. Watkins (Eds.), *Approaches to Canadian economic history*. (1-15). Toronto, ON: Macmillan.
- Malm, A. (2016). *Fossil capital: The rise of steam-power and the roots of global warming*. New York, NY: Verso.
- Marx, K. (1973). *Grundrisse: Foundations of the critique of political economy*. (M. Nicolaus, Trans) New York: Vintage Books. (Original work published in 1939).
- Marx, K. (2011). *Capital: Volume one*. F.E. Engels (Ed.). (S. Moore & E. Aveling, Trans). New York, NY: Dover. (Original work published in 1906).

- Mayer, J. (2014). *Dark money: The hidden history of the billionaires behind the rise of the radical right*. Toronto, ON: Doubleday.
- Mazur, A. & Lee, J. (1993). Sounding the global alarm: Environmental issues in the US national news. *Social Studies of Science*, 23, 681-720.
- McAdam, D., & Snow, D. A. (2010). *Readings on social movements: Origins, dynamics, and outcomes*. New York, NY: Oxford University Press.
- McCright, A. M., Charters, M., Dentzman, K., & Dietz, T. (2015). Examining the effectiveness of climate change frames in the face of a climate change denial counter-frame. *Topics in Cognitive Science*, 1-25. doi: 10.1111/tops.12171
- McCright, A. M., Dentzman, K., Charters, M., & Dietz, T. (2013). The influence of political ideology on trust in science. *Environmental Research Letters*, 8: 1-9. doi:10.1088/1748-9326/8/4/044029
- McCright, A. M., & Dunlap, R. E. (2000). Challenging global warming as a social problem: An analysis of the conservative movements counter-claims. *Social Problems*, 47(4), 499-522.
- McCright, A. M., & Dunlap, R. E. (2003). Defeating Kyoto: The conservative movement's impact on U.S. Climate Change Policy. *Social Problems*, 50 (3), 348-373.
- McCright, A. M., & Dunlap, R. E. (2010). Anti-reflexivity: The American conservative movement's success in undermining climate science and policy. *Theory, Culture & Society*, 27(2-3), 100-133. doi: 10.1177/0263276409356001

- McCright, A. M., & Dunlap, R. E. (2011a). The politicization of climate change and polarization in the American public's views of global warming, 2001-2010. *The Sociological Quarterly*, *52*, 155-194.
- McCright, A. M., & Dunlap, R. E. (2011b). Cool dudes: The denial of climate change among conservative white males in the United States. *Global Environmental Change*, *21*, 1163-1172. doi: 10.1016/j.gloenvcha.2011.06.003
- McCright, A.M., Dunlap, R., & Xiao, C. (2014). The impacts of temperature anomalies and political orientation on perceived winter warming. *Nature Climate Change*, *4*, 1077-1081. doi: 10.1038/NCLIMATE2443
- McCright, A.M., Marquart-Pyatt, S.T., Shwom, R.L., Brechin, S. R., & Allen, S. (2016). Ideology, capitalism, and climate: Explaining public views about climate change in the United States. *Energy research & Social Science*, *21*, 180-189.  
<http://dx.doi.org/10.1016/j.erss.2016.08.003>
- McComas, K. & Shanahan, J. (1999). Telling stories about global climate change: Measuring the impact of narratives on issue cycles. *Communication Research*, *26(1)*, 30-57.
- Mccombs, M. (2004). *Setting the agenda: The mass media and public opinion*. Malden, MA: Blackwell Publishing Inc.
- McGann, J.G., (2015). Global go to think tank index report. Retrieved from [http://repository.upenn.edu/cgi/viewcontent.cgi?article=1009&context=think\\_tanks](http://repository.upenn.edu/cgi/viewcontent.cgi?article=1009&context=think_tanks)
- McKittrick, R., D'Aleo, J., Khandekar, M., Kininmonth, W., Essex, C., Karlén, W, ... O'Brien, J.J. (2007). *Independent summary for policymakers: IPCC fourth*

- assessment report*. Retrieved from  
<http://www.forecastingprinciples.com/files/ISPM-2007.pdf>
- McManus, P.A. (2000). Beyond Kyoto? Media representation of an environmental issue. *Australian Geographical Studies*, 38(3), 306-319.
- Meissner, D. (2018, August 4). Trudeau defends decision to buy Trans Mountain pipeline at Vancouver Island event. *Global News*. Retrieved from  
<https://globalnews.ca/news/4371887/trudeau-defends-government-buying-trans-mountain>.
- Mol, A. Spaargaren, G., & Sonnenfeld, D.A. (2014). Ecological modernization theory: Taking stock, moving forward. In S.D. Lockie, D.A. Sonnenfeld, & D. Fisher, (Eds), *Handbook of Social and Environmental Change*, Routledge, N.Y.: Routledge International.
- Murphy, R. (2015). The media constructions of climate change quiescence: Veiling the visibility of a super emitter. *Canadian Journal of Sociology*, 40(3): 331-354.
- Naylor, R.T. (1972). The rise and fall of the third commercial empire of the St. Lawrence. In G. Teeple (ed), *Capitalism and the national question in Canada*. Toronto, ON: University of Toronto Press.
- Neubauer, R. (2011). Manufacturing junk: Think tanks, climate denial, and neoliberal hegemony. *Australian Journal of Communication*, 38(3), 65-88.
- Neuendorf, K. A. (2002). *The content analysis guidebook*. London: Sage.
- Newell, P., & Paterson, M. (1998). A climate for business: Global warming, the state and capital. *Review of International Political Economy*, 5(4), 679-703.

- Nikiforuk, A. (2010). *Tar sands: Dirty oil and the future of a continent*. Vancouver, BC: Greystone Books.
- Nikiforuk, A. (2012). *The energy of slaves: Oil and the new servitude*. Vancouver, BC: Greystone Books.
- Nisbet, R. (1980). *History of the idea of progress*. New York (NY): Basic Books Inc.
- Norgaard, K. M. (2009). Cognitive and behavioral challenges in responding to climate change: Background paper prepared for the World Development Report 2009. Retrieved from <https://pages.uoregon.edu/norgaard/pdf/Cognitive-Behavioral-Climate-Change-Norgaard-2009.pdf>
- O'Connor, Ryan (2017, January 31). A Look into Canada's Most Controversial Environmental Organization. *Vice*. Retrieved from [https://www.vice.com/en\\_ca/article/gvdy5m/a-look-into-canadas-most-controversial-environmental-organization](https://www.vice.com/en_ca/article/gvdy5m/a-look-into-canadas-most-controversial-environmental-organization).
- Oreskes, N. (2004). The scientific consensus on climate change. *Science*, 306 (5702), 1686. doi: 10.1126/science.1103618
- Oreskes, N. & Conway, E. M. (2011). *Merchants of Doubt: How a handful of scientists obscured the truth on issues from tobacco smoke to global warming*. New York, NY: Bloomsbury Press.
- Panitch, L. (1981). Dependency and class in Canadian political economy. *Studies in Political Economy: A Socialist Review*, 6(1), 7-33.
- Piketty, T. (2014). *Capital in the twenty-first century*. (Goldhammer, A., Trans.). Cambridge, MA: The Belknap Press of Harvard University Press.

- Sampei, Y. & Aoyagi-Usui, M. (2009). Mass-media coverage, its influence on public awareness of climate-change issues, and implications for Japan's national campaign to reduce greenhouse gas emissions. *Global Environmental Change*, 19, 203-212.
- Samson, P.R. (2001). Canadian circumstances: The evolution of Canada's climate change policy. *Energy & Environment* 12(2&3), 199-215.
- Sayer, A. (2010). *Method in social science: A realist approach (2<sup>nd</sup> ed.)*. New York, NY: Routledge.
- Sayer, A. (2000). *Realism and social science*. London: Sage.
- Schafer, M.S. & Schlichting, I. (2014). Media representations of climate change: A meta-analysis of the research field. *Environmental Communication*, 8(2), 142-160.
- Schmidt, R. (1981). Canadian political economy: A critique. *Studies in political economy*, 6(3), 65-92. <https://doi.org/10.1080/19187033.1981.11675701>
- Schnaiberg, A., Pellow, D., & Weinberg, A. (2003). The treadmill of production and the environmental state. In C.Humphrey, T. Lewis, & F. Buttel (Eds). *Environment, Energy, and Society. Exemplary Works* (412-425). Wadsworth: Belmont.
- Simpson, J., Jaccard, M., & Rivers, N. (2007). *Hot air: Meeting Canada's climate change challenge*. Toronto, ON: McClelland & Stewart Ltd.
- Smith, H. (1998). Stopped cold. *Alternatives Journal*, 24(4), 10-16.  
<http://link.galegroup.com.libproxy.uregina.ca:2048/apps/doc/A21238551/ITOF?u=ureginalib&sid=ITOF&xid=e4e68d3b>
- Stoddart, M.C.J., Anttila, T.Y., Tinadall, D.B. (2017). Media, politics, and climate change: The ASA Task Force report and beyond. *Environmental Sociology* 3(4), 309-320. doi: 10.1080/23251042.2017.1329613

- Stoddart, M.C.J., Haluza-Delay, R., & Tindall, D. (2016). Canadian news media coverage of climate change: Historical trajectories, dominant frames and international comparisons. *Society & Natural Resources*, 29(2), 218-232.
- Stoddart, M.C.J. & Smith, J. (2016). The endangered arctic, the arctic as resource frontier: Canadian news media narratives of climate change and the north. *Canadian Review of Sociology*, 53(3), 316-336.
- Stokes, B., Wike, R., & Carle, J. (2015). Global concern about climate change, broad support for limiting emissions: U.S., China less worried; partisan divides in key countries. Pew Research Center, Washington, D.C. Retrieved 2015-11-07 from: <http://www.pewglobal.org/2015/11/05/global-concern-about-climate-change-broad-support-for-limiting-emissions/>
- Stone, L. (2019, January 22). Doug Ford warn of recession with carbon tax, economists disagree. *The Globe and Mail*. Retrieved from <https://www.theglobeandmail.com/canada/article-doug-ford-warns-of-recession-with-carbon-tax-economists-disagree/>
- Swyngedouw, E. (2010). Apocalypse forever? Post-political populism and the spectre of climate change. *Theory, Culture & Society*, 27(2-3), 213-232.
- Taft, K. (2017). *Oil's deep state: How the petroleum industry undermines democracy and stops action on global warming – in Alberta, and in Ottawa*. Toronto, ON: James Lorimer & Company Ltd.
- Takahashi, B. & Meisner, M. (2012). Climate change in Peruvian newspapers: The role of foreign voices in a context of vulnerability. *Public Understanding of Science*, 22(4), 427-442. doi: 10.1177/0963662511431204.

- Tencer, D. (2014, March 21). Koch brothers, tea party billionaires, donated to right-wing Fraser Institute, reports show. Retrieved from [https://www.huffingtonpost.ca/2012/04/26/koch-brothers-fraser-institute\\_n\\_1456223.html](https://www.huffingtonpost.ca/2012/04/26/koch-brothers-fraser-institute_n_1456223.html).
- Tindall, D.B., Stoddart, M.C.J., & Callison, C. (2018). The relationships between climate news coverage, policy debate, and societal decisions. *Oxford Research Encyclopedia of Climate Science*. Retrieved from <https://oxfordre.com/climatescience/view/10.1093/acrefore/9780190228620.001.0001/acrefore-9780190228620-e-370>
- Trumbo, C. (1996). Constructing climate change: Claims and frames in US news coverage of an environmental issue. *Public Understanding of Science*, 5, 269-283. <https://doi.org/10.1088/0963-6625/5/3/006>
- Ungar, S. (1998). Recycling and the dampening of ecological concern: The role of large and small actors in shaping the environmental discourse. *Canadian Review of Sociology and Anthropology*, 35, 253-276. doi:10.1023/A:1005417410867
- Watkins, M.H. (1963). A staple theory of economic growth. *Canadian Journal of Economics and Political Science*, 29(2), 141-158. doi: <https://doi.org/10.2307/139461>
- Weber, R. P. (1990). *Basic content analysis*. London: Sage.
- Wilson, K., (2000). Communicating climate change through the media. In S. Allan, B. Adam, & C. Carter (Eds), *Environmental risks and the media* (201-217). New York, NY: Routledge.

- World Bank (2017). CO2 emissions (metric tons per capita). Retrieved 2017.06.03 from:  
[http://data.worldbank.org/indicator/EN.ATM.CO2E.PC?locations=CA&year\\_high\\_desc=true](http://data.worldbank.org/indicator/EN.ATM.CO2E.PC?locations=CA&year_high_desc=true).
- Young, N. (2011). Working the fringes: The role of letters to the editor in advancing non-standard media narratives about climate change. *Public Understanding of Science*, 22(4), 443-459. doi: 10.1177/0963662511414983
- Young, N., Coutinho, A. (2013). Government, anti-reflexivity, and the construction of public ignorance about climate change: Australia and Canada compared. *Global Environmental Politics*, 13(2), 89-108.
- Young, N. & Dugas, E. (2011). Representations of climate change in Canadian national print media: The banalization of global warming. *Canadian Sociological Review*, 48(1), 1-22.
- Young, N. & Dugas, E. (2012). Comparing climate change coverage in Canadian English and French language print media: Environmental values, media cultures and the narration of global warming. *Canadian Journal of Sociology*, 37(1), 25-54.
- Zhao, X. (2009). Media use and global warming perceptions: A snapshot of the reinforcing spirals. *Communication Research*, 36 (5), 698-723.

## Appendix A – Data Set

### Globe and Mail

<u>Citation</u>	<u>Title</u>	<u>Authors</u>
GM, Anderssen & Andrew-gee, 160416C	The masterminds of the Leap Manifesto	Anderssen, Erin; Andrew-gee, Eric
GM, Andrew-geem 151130B	The Journey To Cop21	Andrew-Gee, Eric
GM, Bailey, 151109A	Mulcair says NDP ready for 'real change'	Bailey, Ian
GM, Bailey, 160304C	Clark hopes climate deal means support for Alberta hydro link	Bailey, Ian
GM, Bailey, 160317B	Clark optimistic about LNG deal approval	Bailey, Ian
GM, Bailey, 160506	Assistance program needs work: Clark	Bailey, Ian
GM, Barrett, 160216A	Canada's green nuclear tech could help close the GHG gap	Barrett, John
GM, Blackwell, 151222	U.S. tax move brightens picture for Canadian wind, solar firms	Blackwell, Richard
GM, Blackwell, 160528	Focus on greener future for oil: Cenovus CEO	Blackwell, Richard
GM, Bloomer, 160227B	The pipeline industry needs clarity about Canada's regulatory process	Bloomer, Chris
GM, Boyd, 151007	Why aren't we talking about renewable energy?	Boyd, David
GM, Bozikovic, 151718	Shelters From The Storm	Bozikovic, Alex
GM, Bozikovic, 160114	Architecture For The 99 Per Cent	Bozikovic, Alex
GM, Bubbers, 151231	Fun cars, easy-to-use tech, a true wagon	Bubbers, Matt
GM, Burney, 150709A	Canada-China FIPA	Burney, Ian
GM, Busza, 160408	An Asian water crisis looms. Canada can be part of the solution	Busza, Eva
GM, Cameron, 151031A	Carbon pricing is an opportunity, but any revenue has to go back to the provinces	Cameron, Mark
GM, Carrick, 150815A	Good corporate citizen, better investment	Carrick, Rob
GM, Cecco, 160618	Wildfires greatly affect water quality	Cecco, Leyland
GM, Chase & Jones, 150923	Clinton declares opposition to Keystone	Chase, Steven; Jones, Jeffrey
GM, Chase & Koring, 151107C	Ottawa plans 'fresh start' on energy	Chase, Steven; Koring, Paul

GM, Chase, 151113	PM to meet with premiers on climate	Chase, Steven
GM, Chase, 160526	Tories convene to pitch greener message	Chase, Steven
GM, Chichilnisky & Polychroniou, 151208A	While the leaders talk, carbon-negative tech could save the planet	Chichilnisky, Graciela; J Polychroniou, C
GM, Chiose, 160330	U of T refines criteria for making investment decisions	Chiose, Simona
GM, Clark, 151026	Climate change deal possible with premiers	Clark, Campbell
GM, Clark, 151107A	As Keystone's sun sets, another rises from Energy East	Clark, Campbell
GM, Clark, 151127	Canada to tout leadership ability at climate-change talks	Clark, Campbell
GM, Clark, 151130A	Trudeau draws praise as leaders gather for global climate summit	Clark, Campbell
GM, Clark, 160305	Premiers' meeting long on principles, short on specifics	Clark, Campbell
GM, Clark, 160409B	Mulcair needs a bold, blunt movement	Clark, Campbell
GM, Cotter, 151127	Association warns Alberta against coal phase-out	Cotter, John
GM, Coulson & Robertson, 160402	Do we support Liberal carbon policy? Broadly, but the devil's in the details	Coulson, Tony; Robertson, Sarah
GM, Cryderman & McCarthy	TransCanada to launch NAFTA claim over Keystone	Cryderman, Kelly; McCarthy, Shawn
GM, Cryderman,	Alberta moves to introduce fossil-fuel tax	Cryderman, Kelly
GM, Cryderman, 150925	TransCanada layoffs to begin with a fifth of senior staff	Cryderman, Kelly
GM, Cryderman, 150930	TransCanada to seek pipeline consent from state body	Cryderman, Kelly
GM, Cryderman, 151104	White House sees 'politics at play' in Keystone gambit	Cryderman, Kelly
GM, Cryderman, 151119	Drillers foresee years of bleakness	Cryderman, Kelly
GM, Cryderman, 160415A	A new reality: low oil prices and higher energy costs	Cryderman, Kelly
GM, Curry	Ottawa fails to track gas-tax funds: watchdog	Curry, Bill
GM, Dachis, 160610	Ontario climate plan ignores the beauty of cap-and-trade	Dachis, Benjamin
GM, Dhillon, 160420	Wildfire season busiest in a decade	Dhillon, Sunny

GM, Dixon, 160509A	The climate-change challenge for leaders	Dixon, Guy
GM, El Akkad, 150718B	The disaster scenario	El Akkad, Omar
GM, El Akkad, 150907	Climate change vs. economy	El Akkad, Omar
GM, El Akkad, 151230B	The challenge of making climate change a hot-button issue in U.S.	El Akkad, Omar
GM, El Akkad, 160530	Drought-weary farmers eye Oregon land	El Akkad, Omar
GM, Fife, 160302	PM, Obama set to endorse continental strategy on climate change	Fife, Robert
GM, Fife, 160309B	U.S. cites 'special relationship' between leaders	Fife, Robert
GM, Fife, 160628	Leaders to set clean-energy target, discuss cushion from Brexit fallout	Fife, Robert
GM, Fraser & Charlebois, 151130C	We can't talk emissions without talking agriculture	Fraser, Evan; Charlebois, Sylvain
GM, Galloway, 150716	Canada, Russia unite to ban Arctic fishing	Galloway, Gloria
GM, Galloway, 160226B	Stakes raised for weather preparedness	Galloway, Gloria
GM, Gee, 160220	Like it or not, Toronto is a nuclear city	Gee, Marcus
GM, Gignac, 16026B	Remote areas losing lifeline of ice roads	Gignac, Julien
GM, Giovannetti & Cryderman, 160204	PM pledges cash lifeline, changes to EI for struggling Alberta	Giovannetti, Justin; Cryderman, Kelly
GM, Giovannetti & Jones, 151123	Notley unveils carbon plan on eve of first ministers' meeting	Giovannetti, Justin; Jones, Jeffrey
GM, Giovannetti, 151001B	Alberta's outgoing U.S. representative takes parting shot at Notley	Giovannetti, Justin
GM, Giovannetti, 160409A	Environment Minister calls NDP's proposed climate change plan 'a betrayal'	Giovannetti, Justin
GM, Hammoud & Sabia, 160122	At Davos and beyond, let's remind the world why it needs more Canada	Hammoud, Tawfik; Sabia, Michael
GM, Hume, 150723	Premier Clark warns province is in for more fires	Hume, Mark
GM, Hume, 151023	Rockies glacier sends 'strong message' on climate	Hume, Mark
GM, Hume, 151109B	The muzzle is off for federal scientists	Hume, Mark

GM, Hume, 160314	It's Clark vs. 'the forces of no,' with Ottawa in the middle	Hume, Mark
GM, Hume, 160521A	Fort Mac: Why haven't we heeded lessons?	Hume, Mark
GM, Hunter, 150708	Ski hills forge new road to a warmer future	Hunter, Justine
GM, Hunter, 150921	Mayors to press Clark on wildfire prevention	Hunter, Justine
GM, Hunter, 151019	Province to update climate plan	Hunter, Justine
GM, Hunter, 151022	BC Hydro, clean energy vow co-operation	Hunter, Justine
GM, Hunter, 160127A	B.C., federal governments set to square off over LNG	Hunter, Justine
GM, Hunter, 160201	Province needs to take action if it hopes to regain status as climate-change leader	Hunter, Justine
GM, Hunter, 16029	Clark should back a national climate plan	Hunter, Justine
GM, Hunter, 160307	Three views of the B.C.-Alberta hydro project	Hunter, Justine
GM, Hunter, 160517C	Why B.C. is playing catch-up in the race to go green	Hunter, Justine; Giovannetti, Justin
GM, Hunter, 160520	NEB puts Clark in the hot seat	Hunter, Justine; Hume, Mark
GM, Hunter, 160616	Clean-energy spending down in Canada despite promises	Hunter, Justine
GM, Hutchinson, 160427B	A constitutional puzzle	Hutchinson, Allan
GM, Ibbitson, 151105	Trudeau aiming to rebalance foreign policy	Ibbitson, John
GM, Ibbitson, 160323	Going for broke with bold activist budget	Ibbitson, John
GM, Isaacs, 151031	If we innovate, the oil age may not have to end	Isaacs, Eddy
GM, Jang, 150714	LNG bill sets stage for Liberal-NDP fight	Jang, Brent
GM, Jang, 150815B	Shape up or ship out	Jang, Brent
GM, Jang, 160322	More concerns raised over B.C. gas project	Jang, Brent
GM, Jang, 160531	Pacific NorthWest LNG rejects experts' climate concerns	Jang, Brent
GM, Joling, 151230C	Climate change threatens traditional Inuit food supply	Joling, Dan
GM, Jones, 151014	Oil patch paints grim self-portrait in submission to climate review	Jones, Jeffrey

GM, Jones, 151124A	Power firms' hard reality: the end of coal	Jones, Jeffrey
GM, Jones, 151126	Climate policy helps path to pipelines: Carr	Jones, Jeffrey; Cryderman, Kelly
GM, Jones, 160123A	Energy policy can't be decided at city hall	Jones, Jeffrey
GM, Jones, 160130	Even the naysayers should like Alberta's new royalty framework	Jones, Dylan
GM, Jones, 160601	Trump's Keystone grab How 'America First' could play out for Canada	Jones, Jeffrey
GM, Jutras, 160217	Why are humans so obsessed with meat?	Jutras, Lisan
GM, Kane, 150731	Pipeline review faces new resistance	Kane, Laura
GM, Keenan, 160422	VW Canada to compensate diesel owners	Keenan, Greg
GM, Keenan, 160505	Inquiry probes VW, Audi diesel marketing	Keenan, Greg
GM, Keenan, 160614	Ontario to give Fiat Chrysler \$80-million	Keenan, Greg
GM, Koring, 150829	Obama seeks northern climate alliance	Koring, Paul
GM, Koring, 151107B	Canada was irrelevant in Obama's decision	Koring, Paul
GM, Lacey, 150710	Say yes to distress	Lacey, Liam
GM, Lederman, 150803	Obama faces pitched battle with new pollution controls	Lederman, Josh
GM, Lewis & McCarthy, 150905	The Oil Sands' Stark New Reality	Lewis, Jeff; McCarthy, Shawn
GM, Lewis, 151218	Energy East costs jump to \$15.7-billion on route changes	Lewis, Jeff
GM, Lowrie, 160208	Anglican diocese looks to secure future through ethical investing	Lowrie, Morgan
GM, MacDonald, 160227	U.S., climate woes sapping syrup's stability	MacDonald, Gayle
GM, MacGregor, 151012	'Everything Comes Back To The River'	MacGregor, Roy
GM, Marlow, 160317A	LNG terminal decision to go to cabinet	Marlow, Iain
GM, Marlow, 160429	El Nino's disastrous effects still hindering Asia's prosperity	Marlow, Iain
GM, Marotte, 151116B	Sell Hydro-Québec? No way, chair says	Marotte, Bertrand

GM, Martin, 160123B	Ottawa brings a fresh vibe to festering age-old issues	Martin, Patrick
GM, Mason, 150916	Oil reforms are coming, but pace is unclear	Mason, Gary
GM, Mason, 150917	Notley seeks delicate balance on environment and budget	Mason, Gary
GM, Mason, 160113	With a provincial election coming in 2017, expect 2016 agenda to keep voters in mind	Mason, Gary
GM, Mason, 160206A	Trudeau dealing with a loaves and fishes problem	Mason, Gary
GM, Mason, 160423B	A new, more moderate normal for Alberta - and it's not necessarily a bad thing	Mason, Gary
GM, Mason, 160504B	Tension heats up ahead of premiers' conference	Mason, Gary
GM, McCarthy & Galloway, 151124B	First ministers agree to forge national climate strategy	McCarthy, Shawn; Galloway, Gloria
GM, McCarthy & Lewis, 160226A	Costs, emissions key challenges for oil sands	McCarthy, Shawn; Lewis, Jeff
GM, McCarthy, 150702	Oil sands plan for park alarms UN agency	McCarthy, Shawn
GM, McCarthy, 150730	Harper vents over Obama's failure to approve Keystone	McCarthy, Shawn
GM, McCarthy, 150917	Canada risks falling behind on carbon shift	McCarthy, Shawn
GM, McCarthy, 150928	NDP targets climate change as numbers flag in Quebec	McCarthy, Shawn
GM, McCarthy, 151001A	TransCanada playing long game in fight for pipeline	McCarthy, Shawn
GM, McCarthy, 151021	Oil patch worries new government means new costs, new roadblocks for producers	McCarthy, Shawn
GM, McCarthy, 151106	McKenna crams for world climate summit	McCarthy, Shawn
GM, McCarthy, 151110	Minister vows to toughen pipeline assessments heading into Paris summit	McCarthy, Shawn
GM, McCarthy, 151116A	Canada, U.S., Mexico talk energy	McCarthy, Shawn
GM, McCarthy, 151128	Xi and Obama to launch Paris summit	McCarthy, Shawn
GM, McCarthy, 151202	Great Lakes On The Mend, But New Threats Loom	McCarthy, Shawn
GM, McCarthy, 151204	Gore says carbon investors could be 'trapped holding stranded assets'	McCarthy, Shawn

GM, McCarthy, 151208B	Manitoba signs on to carbon market	McCarthy, Shawn
GM, McCarthy, 151210	Island nations seek damage assurances	McCarthy, Shawn
GM, McCarthy, 151212C	Latin Americans Balk At Carbon-trading Reference	McCarthy, Shawn
GM, McCarthy, 151217	U of T may divest itself of some fossil fuel firms' shares	McCarthy, Shawn
GM, McCarthy, 151224	Pension funds not sold on energy divestment	McCarthy, Shawn
GM, McCarthy, 160109	Methane could be fuel for the future	McCarthy, Shawn
GM, McCarthy, 160120	Ottawa urged to protect Great Lakes	McCarthy, Shawn
GM, McCarthy, 160126	Energy projects to require climate test	McCarthy, Shawn
GM, McCarthy, 160213B	Canada, U.S., Mexico vow to renew focus on clean power	McCarthy, Shawn
GM, McCarthy, 160309C	Canada, U.S. target methane in bid to curb climate change	McCarthy, Shawn
GM, McCarthy, 160324	McGill rejects fossil-fuel divestment initiative	McCarthy, Shawn
GM, McCarthy, 160413	Mining Association of Canada backs national carbon price	McCarthy, Shawn
GM, McCarthy, 160415B	An inconvenient truth for fossil-fuel firms	McCarthy, Shawn
GM, McCarthy, 160423A	Trudeau urges speedy ratification of Paris accord	McCarthy, Shawn
GM, McCarthy, 160503	Forestry group pledges GHG goals, but not emissions cuts	McCarthy, Shawn
GM, McCarthy, 160511	Trudeau vows to clamp down on methane emissions	McCarthy, Shawn
GM, McCarthy, 160521B	Canadian oil faces growing competition overseas	McCarthy, Shawn
GM, McCarthy, 160604	Ontario prepares for cap-and-trade	McCarthy, Shawn
GM, McCarthy, 160613	Morneau pushes for federal tax on carbon	McCarthy, Shawn
GM, McCarthy, 160622	Ontario, Quebec to spend \$1-billion on GHG allowances	McCarthy, Shawn
GM, McCarthy, 160623B	RBC backs adoption of carbon price	McCarthy, Shawn
GM, McCarthy, 160629	Federal government sets 'carbon neutral' target	McCarthy, Shawn
GM, McCarthy, 160630	Leaders agree to new energy plan at summit	McCarthy, Shawn

GM, McLeod & Sajid, 160514	How the West can lead on climate and energy	McLeod, Trevor; Sajid, Shafak
GM, Milner, 160304A	China...s pending five-year plan could see million of workers in state-run ...zombie... companies laid off	Milner, Brian
GM, Milstead, 151205B	'One of the defining issues of our time'	Milstead, David
GM, Morgan, 151215	Devastation of oceans a bigger problem than carbon threat	Morgan, Gwyn
GM, Morgan, 160104	Three harmful myths to ditch	Morgan, Gwyn
GM, Morrow, 160709B	PM's stand on global warming draws heat at summit	Morrow, Adrian
GM, Mortished, 160617	Market for hydrocarbons will shrink, slowly	Mortished, Carl
GM, NA, 150821	Study underlines irrigation's impact	No Author Listed
GM, NA, 150824	Climate change a risk for cities, experts say	No Author Listed
GM, NA, 150924A	Clinton wants Canada, United States, Mexico to forge climate-change compact	No Author Listed
GM, NA, 150924B	Energy industry must clean up its act, Notley warns	No Author Listed
GM, NA, 151030	Alberta, N.b. Premiers To Work On Energy East	No Author Listed
GM, NA, 151128C	The Paris emissions mission	No Author Listed
GM, NA, 160407	Climate debate shifting, Leach says	No Author Listed
GM, NA, 160608A	Ontario backs natural gas stations	No Author Listed
GM, NA, 160608B	Carney lauds Alberta climate plan	No Author Listed
GM, NA, 160623A	First Nations' role highlighted	No Author Listed
GM, Nathwani & Andersen, 160427A	Indigenous communities must be part of the global green energy revolution	Nathwani, Jatin; Andersen, Colin
GM, Nathwani, 151128A	Drafting a new architecture for energy	Nathwani, Jatin
GM, Nelson, 160510	Getting a first-hand look at firestorm's aftermath	Nelson, Jacqueline
GM, O'leary, 160304B	You have to do something, Ms. Notley - here's a four-point plan for Alberta	O'leary, Kevin
GM, Oliver, 151111	Keystone shows us that relying on others leaves Canada vulnerable	Oliver, Joe
GM, Omand, 150708	Robertson to meet with Pope on climate	Omand, Geordon

GM, Putin, 151117	Russia wants integrated, transparent trade with Asia	Putin, Vladimir
GM, Ragan, 150811	Smooth transition needed for carbon pricing and free trade	Ragan, Christopher
GM, Reguly, 151003	Don't send diesel to death row	Reguly, Eric
GM, Reguly, 151027	Bishops and cardinals push for legally binding climate agreement	Reguly, Eric
GM, Reguly, 151128B	Alberta carbon plan is deceptive	Reguly, Eric
GM, Reguly, 151201	Divided leaders seek common ground	Reguly, Eric
GM, Reguly, 151203B	How to judge summit's success	Reguly, Eric
GM, Reguly, 151212A	Talks toil past deadline to forge deal	Reguly, Eric; McCarthy, Shawn
GM, Reguly, 151214	Small island states make waves with push for tougher target	Reguly, Eric
GM, Sachgau, 150901	From legacy vision to election issue	Sachgau, Oliver
GM, Semeniuk, 150910	Prince calls for leadership on climate	Semeniuk, Ivan
GM, Semeniuk, 150922	Historic data warn of future water woes	Semeniuk, Ivan
GM, Semeniuk, 160213A	Plan to monitor Baffin Bay proposed	Semeniuk, Ivan
GM, Shribman, 160509	Job-loss anger burns hot in coal country	Shribman, David
GM, Sieniuc, 150817	Drought-stricken forests face new threat	Sieniuc, Kat
GM, Smith & Smith, 160624	B.C. shows climate action is about the economy, not just the environment	Smith, Merran; Smith, Marcia
GM, Smith, 151212B	Paris was about business, not politics	Smith, Merran
GM, Southey, 151205A	How to recognize people who don't recognize reality	Southey, Tabatha
GM, Stone & Giovannetti, 160411	Divided NDP finds common ground by turfing Mulcair	Stone, Laura; Giovannetti, Justin
GM, Stone, 160318	Liberals to return OAS eligibility to 65	Stone, Laura
GM, Surman & Lennox, 160504A	Canada's 'innovation agenda' is more than just tech	Surman, Tonya; Lennox, Victoria
GM, Tabachnick, 151124C	Canada's solution may offer more comfort than change	Tabachnick, David
GM, Taber & Morrow, 150718A	Energy strategy weakens climate goals	Taber, Jane; Morrow, Adrian

GM, Taber, 150717	Wall decries green bent in energy strategy	Taber, Jane
GM, Taber, 160518	Brown brings modernity to PCs	Taber, Jane
GM, Tait, 151010	NDP duped voters by implementing its promises, Wildrose finance critic says	Tait, Carrie
GM, Tait, 151128D	A Policy 'Sweet Spot'	Tait, Carrie
GM, Thanawala, 160127B	'Doomsday Clock' unchanged, but scientists not placated	Thanawala, Sudhin
GM, Thanh & Chowdhry, 151209	A Matter Of Degrees	Thanh Ha, Tu; Chowdhry, Affan
GM, Thibeault, 160511	Apocalypse whenever	K Thibeault, Matthew
GM, Thomas, 160428	Why smart companies are choosing full disclosure	Thomas, Kevin
GM, Torell, Francois & Cullen, 150728	Canada's ocean science capacity is limited	D Tortell, Philippe ;Francois, Roger; T Cullen, Jay
GM, Troope, 160227A	Promises Just Aren't Enough	Toope, Stephen
GM, Vanderklippe & Hunter, 160517A	Ottawa wants details of B.C. climate plan	Vanderklippe, Nathan; Hunter, Justine
GM, Vanderklippe, 151203A	Heat waves sap productivity, study says	Vanderklippe, Nathan
GM, Vanderklippe, 160517B	Global warming 'is not gender neutral'	Vanderklippe, Nathan
GM, Waterous, 151230A	We need a bilateral deal to give Paris meaning	Waterous, Adam
GM, Weber, 150707	Arctic shrubs may accelerate warming, study finds	Weber, Bob
GM, Weber, 151207	Scientists gather to discuss rapid warming in the Arctic	Weber, Bob
GM, Weber, 160111	Parks Canada firefighting funds depleted	Weber, Bob
GM, Weber, 160329	'Warm, crazy winter' sees record low Arctic sea ice	Weber, Bob
GM, Wheeler, 151009	Learning how to face the inconvenient truth	Wheeler, Brad
GM, Yetiv & Fretz, 151212	A Saudi fracking boom could be a tectonic shift	Yetiv, Steve; Fretz, Alexander
GM, York, 160216B	Drought	York, Geoffrey
GM, Zilio, 160608C	B.C. leaders campaign against Trans Mountain pipeline	Zilio, Michelle

**National Post**

<u>Citation</u>	<u>Title</u>	<u>Authors</u>
NP, Adams, 151118	State surveillance goes green	Adams, Tom
NP, Baird & Johnston, 151204B	Think China is the answer to the oil industry's woes?; Think again	Baird, John R;Johnston, Robert
NP, Black, 150926	Climate alarmists and other discarded relics	Black, Conrad
NP, Black, 151003	The NDP moment has passed	Black, Conrad
NP, Bousso, 151017	Big Oil fights image ahead of climate talks; Promise to limit flaring but no deal on carbon	Bousso, Ron
NP, Brean, 150915	The left's big Leap; Naomi Klein has a new manifesto, and the usual suspects are lining up to back it	Brean, Joseph
NP, Cameron & Chervinsky, 150922	Fighting climate change with make-believe and unicorns	Cameron, Mark;Chervinsky, Tom
NP, Cattaneo & Morgan, 160305	The greening of Canada's oil	Cattaneo, Claudia;Morgan, Geoffrey
NP, Cattaneo, 150821	A pipe with too much input; Kinder Morgan soldiers through final pitch	Cattaneo, Claudia
NP, Cattaneo, 150827	Obama to add pain with KXL denial; As patch suffers, rejection expected next week	Cattaneo, Claudia
NP, Cattaneo, 150929	The last great hope for oilsands	Cattaneo, Claudia
NP, Cattaneo, 150930A	Climate fogging up oilsands focus	Cattaneo, Claudia
NP, Cattaneo, 151006	Suncor goes all-in on oilsands; COS bid would make it largest Syncrude player	Cattaneo, Claudia
NP, Cattaneo, 151028	More oil blood in budget	Cattaneo, Claudia
NP, Cattaneo, 151103	Pause sought in Keystone review; Transcanada	Cattaneo, Claudia
NP, Cattaneo, 151107C	Theatre of the absurd	Cattaneo, Claudia
NP, Cattaneo, 151125A	Redford embarks on comeback	Cattaneo, Claudia
NP, Cattaneo, 151204A	NDP 's liability concern led to secret deal; Cancelled projects	Cattaneo, Claudia
NP, Cattaneo, 151207	Making a case for pipelines	Cattaneo, Claudia
NP, Cattaneo, 151211A	Cenovus sees no pain in NDP cap; Growth plans unaffected, spending cut 19%	Cattaneo, Claudia
NP, Cattaneo, 151216	Emera rides Alberta's push for clean energy; Looking to invest	Cattaneo, Claudia

NP, Cattaneo, 151228A	Free oil? Not going to happen; Why forecasting energy prices is a crapshoot	Cattaneo, Claudia
NP, Cattaneo, 160108	KXL suit just start of pushback	Cattaneo, Claudia
NP, Cattaneo, 160112	Oil export strategy in tatters; B.C. rejects Trans Mountain expansion	Cattaneo, Claudia
NP, Cattaneo, 160123	Alberta readies royalty regime for uncertain times; As oil patch struggles, energy minister vows new rules won't make things worse	Cattaneo, Claudia
NP, Cattaneo, 160205	Oilpatch 'encouraged' by PM's visit	Cattaneo, Claudia
NP, Cattaneo, 160213	The NEB and Canada's pipeline divide; Regulator now a pawn in climate fight, ex-chair says	Cattaneo, Claudia
NP, Cattaneo, 160220	Cold Lake feeling chill of oil slump; 'We keep beating our oil industry with a stick, and nobody wants to stand up'	Cattaneo, Claudia
NP, Cattaneo, 160308	Petronas losing patience on LNG; Gives Ottawa ultimatum on approval	Cattaneo, Claudia
NP, Cattaneo, 160311	Trudeau basks but Obama wins	Cattaneo, Claudia
NP, Cattaneo, 160402	Suncor CEO gets pay boost, kudos for emissions work; Steven Williams	Cattaneo, Claudia
NP, Cattaneo, 160402	The Grand Bargain; How A pipelines for- hydro deal could save alberta's projects, B.C.'s site C dam and help ottawa's green push	Cattaneo, Claudia
NP, Cattaneo, 160423	Meet The Green Team; The Oil Patch Can Work With	Cattaneo, Claudia
NP, Cattaneo, 160427	Husky is signpost for patch recovery	Cattaneo, Claudia
NP, Cattaneo, 160507	Notley's annus horribilis	Cattaneo, Claudia
NP, Cattaneo, 160517	Climate plan leans on West	Cattaneo, Claudia
NP, Cattaneo, 160527	Trump's keystone shakedown; With friends like these	Cattaneo, Claudia
NP, Cattaneo, 160607	Oil upturn will help Canada dead last; Pipeline delays, climate policies will hurt recovery	Cattaneo, Claudia
NP, Cattaneo, 160610	CEOs plot new green response; Meeting a sign of growing split in oil industry	Cattaneo, Claudia

NP, Cattaneo, 160625A	KXL goes to NAFTA	Cattaneo, Claudia
NP, Chassin, 151117	Fight climate change efficiently	Chassin, Youri
NP, Chestney & Lewis, 151214	Climate agreement may set stage for CO2 pricing; Paris Accord	Chestney, Nina; Lewis, Barbara
NP, Chidley, 151021B	Trudeaumania, but not for investors	Chidley, Joe
NP, Cocoron, 151215B	The economic danger of Paris	Corcoran, Terence
NP, Cohen & Rory, 160526	Board could be amenable to climate expert; Exxon largest publicly traded oil company	Cohen, Luc; Rory Carr Oil
NP, Corcoran, 150924A	Riding Volks into the sunset?	Corcoran, Terence
NP, Corcoran, 151022	From Poloz to Summers; The Liberals' fiscal alternative to money policy	Corcoran, Terence
NP, Corcoran, 151027	Canada's climate boy scout	Corcoran, Terence
NP, Corcoran, 151113C	The CBC's fossil fuel subsidies folly	Corcoran, Terence
NP, Corcoran, 160225A	The great green carbon tax grab	Corcoran, Terence
NP, Corcoran, 160614	Science is broken	Corcoran, Terence
NP, Cosh, 151211B	Notley's miscalculation; The NDP picked on the wrong Albertans this time	Cosh, Colby
NP, Cosh, 160216	So ends the cauliflower panic	Cosh, Colby
NP, Coyne, 150618A	A plan to do as they please; Energy strategy lacks specifics	Coyne, Andrew
NP, Critchley, 151010	Green bond benefits BioAmber	Critchley, Barry
NP, Critchley, 151208B	Positive green progress	Critchley, Barry
NP, Critchley, 151210	Why go green, anyway?	Critchley, Barry
NP, Csanady, 150609	'Get on board' on climate, California's governor says; Slams federal leaders	Csanady, Ashley
NP, De Souza, 150707	A tale of two movements	De Souza, Raymond J
NP, De Souza, 150714	The gospel of Sachs	Father Raymond J De Souza
NP, Den Tandt, 151130A	'Canada is back:' Is it just hot air?	Den Tandt, Michael
NP, Den Tandt, 160418	Liberals adept at adapting; Tory hopes for hapless collapse are disappointed	Den Tandt, Michael
NP, Duffy, 151105A	'Paris will be the first test' for McKenna; Countdown to UN summit on climate change	Duffy, Andrew
NP, Fekete, 160305	Anti-oilsands group will host Trudeau in Washington	Fekete, Jason

NP, Fekete, 160319	Feds seek to regulate 'upstream' emissions; Oil And Gas	Fekete, Jason
NP, Foster, 150828	Energy East fix in at the OEB	Foster, Peter
NP, Foster, 150904	Obama on thin ice	Foster, Peter
NP, Foster, 150911	Climate policy refugees	Foster, Peter
NP, Foster, 151007	Paris's scary agenda	Foster, Peter
NP, Foster, 151014	Economics Nobel gets it half right	Foster, Peter
NP, Foster, 151021A	Not his father's Liberal?	Foster, Peter
NP, Foster, 151113B	Return of the Green Shaft	Foster, Peter
NP, Foster, 151130B	An icon with a mixed record; Maurice Strong; Global champion for environment	Foster, Peter
NP, Foster, 151230	Threats to Canadian oil	Foster, Peter
NP, Foster, 160212	Ban comes to collect Justin's bill	Foster, Peter
NP, Foster, 160602	Resolute takes on the eco 'mob'	Foster, Peter
NP, Francis, 151024	TPP , climate and Keystone on deck; Trudeau's priorities	Francis, Diane
NP, Gardiner, 150825B	U.S. aims to boost solar power use	Gardiner, Harris
NP, Gerson, 151107B	KXL, RIP; Choked on political baloney	Gerson, Jen
NP, Gerson, 160408	Mulcair and NDP face moment of truth	Gerson, Jen
NP, Gerson, 160409	NDPers should look before they Leap	Gerson, Jen
NP, Gerson, 160411	Divided party dumps Mulcair; 48% support worst ever for a party leader	Gerson, Jen
NP, Gerson, 160506	Fort McMurray isn't Karma	Gerson, Jen
NP, Glavin, 151030B	Welcoming back the Liberal old guard	Glavin, Terry
NP, Glavin, 160414	Know the leapers	Glavin, Terry
NP, Goklany, 151013	The great carbon boom	Goklany, Indur M
NP, Gould, 160105	Weather dominates insurance claims in 2015	Gould, Jonathan
NP, Green, 150819	Downgrading the oilsands; Notley plans to transition Alberta away from oil, toward a knowledge-based economy	Green, Kenneth P
NP, Green, 160202	Energy uncertainty moves upstream	Green, Kenneth P
NP, Hanlon, 150925	Europe's dirty little secret	Hanlon, Michael

NP, Healing, 151128A	New royalty regime will cripple some, economist says; 'Period of disruption'	Healing, Dan
NP, Healing, 151128C	New royalty regime will cripple a few, economist says; 'Period of disruption'	Healing, Dan
NP, Hopper, 160225B	When it comes to waste, the 'winners' are	Hopper, Tristin
NP, Hussain, 150924B	Deal 'Famine'; Royalty review makes oilpatch investors edgy	Hussain, Yadullah
NP, Hussain, 151107A	Carbon storage without aid is challenging	Hussain, Yadullah
NP, Hussain, 151119B	Carr vows to heed oilpatch fears; 'Sweet spot' between climate, industry needs	Hussain, Yadullah
NP, Hussain, 151231	For oilfield services, there's little left to cut	Hussain, Yadullah
NP, Hussain, 160126	Exxon expects bitumen output to 'quadruple'; Canada, Venezuela	Hussain, Yadullah
NP, Hussain, 160223	Oilsands growth could come to 'standstill'	Hussain, Yadullah
NP, Hussain, 160422	CO2 cuts equivalent of no cars, trucks: PBO; Current measures not enough to reach targets	Hussain, Yadullah
NP, Hussain, 160502	The oilpatch's war on cost; Alberta's producers have cut costs to the bone. the question is	Hussain, Yadullah
NP, Ibrahim, 151224	Alberta no longer an 'outlier,' Notley says	Ibrahim, Mariam
NP, Ivison, 151201B	Wall vs. Trudeau in Paris: A preview of 2019?	Ivison, John
NP, Ivison, 160305	U.S. envoy defends posting	Ivison, John
NP, Ivison, 160622	Linking pipelines to planes and CO2	Ivison, John
NP, Khandekar, 150916	The climate monsoon	Khandekar, Madhav
NP, Kheiriddin, 160303	Weep for Energy East	Kheiriddin, Tasha
NP, Knutson & Alan, 151015A	Energy policy under minority government	Knutson, Gar; Ross, Alan L
NP, Koonin, 151110	Tough realities at climate talks	Koonin, Steven E
NP, Kuitenbrouwer, 151228B	Solar energy beaming bright	Kuitenbrouwer, Peter
NP, Kuitenbrouwer, 160412	OPG: Not as advertised	Kuitenbrouwer, Peter

NP, Larson, 150902	The case for exporting Canada's water	Larson, Rhett
NP, Lau, 151202B	The climate on campus	Lau, Matthew
NP, Lau, 160401B	U of T's false 'consensus'	Lau, Matthew
NP, Lee & Speer, 160217	Canadian energy to the rescue; Pro-resource agenda has many benefits	Lee, Ian;Speer, Sean
NP, Lee, 151120	Obama prods Canada on Trans-Pacific Partnership; seeks endorsement	Lee Be Rthi Aume
NP, Libin, 160429	Ontario's new, green monstrosity	Libin, Kevin
NP, Libin, 160506B	The unsung hero of Fort Mac	Libin, Kevin
NP, Libin, 160609	Green utopia will cost you	Libin, Kevin
NP, Liebert & Sink, 151105B	TransCanada request to delay review rejected; Keystone XL pipeline	Liebert, Larry;Sink, Justin
NP, Liwanag, 150909	Royalty, celebrities expected for eco gala; Set for eve of tiff	Liwanag, Robert
NP, Ljubanovic, 151205	What did you do on your winter vacation? How 'citizen science' is changing polar travel	Ljubanovic, Kristina
NP, Lomborg, 151215A	Paris missed 99 per cent of climate change	Lomborg, Bjorn
NP, Macdougall, 151114	Taking the Trudeau symphony on a world tour; Replace the plane, and other tips for new PM	Macdougall, Andrew
NP, Macpherson, 151203	Alberta's crippling carbon tax	MacPherson, Paige
NP, McKitrick, 160518	CCCP: Climate Change Coercion Plan	McKitrick, Ross
NP, McKitrick, 150908	When Margaret met Preston	McKitrick, Ross
NP, McKitrick, 151126	So much for the science	McKitrick, Ross
NP, McParland, 150807	Wall right to question equalization; Most Canadian politicians don't touch sacred cow	McParland, Kelly
NP, Mmintz, 151002	Awful election promises	MMintz, Jack
NP, Morgan, 151015B	Notley names diversification advisory panel; Alberta	Morgan, Geoffrey
NP, Morgan, 151107E	TransCanada says it won't back down for 'symbolism'	Morgan, Geoffrey
NP, Morgan, 151124B	AIMCo buys stake in TransAlta Renewables; \$200 million worth	Morgan, Geoffrey
NP, Morgan, 151128B	Stranded assets worry investors; Are natural gas plants at risk after coal is phased out?	Morgan, Geoffrey

NP, Morgan, 151218B	700 ene rgy east two aks add \$4B; Swaps Quebec terminal for N.B. expansion	Morgan, Geoffrey
NP, Morgan, 160115	Oil Shoots Haoles in Alberta, N.L. budgets; Alberta minister can't account for scaled-back carbon tax haul	Morgan, Geoffrey
NP, Morgan, 160128	Ottawa increases pipeline scrutiny; Facing climate test	Morgan, Geoffrey
NP, Morgan, 160203	CAPP blasts 'so-called evidence'; Pipeline Hearings	Morgan, Geoffrey
NP, Morgan, 160219	TransAlta puts Alberta investments 'on hold'	Morgan, Geoffrey
NP, Morgan, 160309	Notley pledges help for oil industry; 'Wide range of initiatives' in Throne speech	Morgan, Geoffrey
NP, Morgan, 160312	Imperial eyes new \$2-billion oilsands plant; New green technology based on SAGD	Morgan, Geoffrey
NP, Morgan, 160317	Alberta's coal fight picks up steam; Firms exploit 'loopholes': minister	Morgan, Geoffrey
NP, Morgan, 160401	Alberta coal plants may shut by 2018: lobby; Notley dismisses fears of soaring power prices	Morgan, Geoffrey
NP, Morgan, 160616	Is this the Wave Of The Future For The Oilsands?; Acceleware Shares Heat Up On Deal To Test 'Inside- Out Microwave' Extraction Technology	Morgan, Geoffrey
NP, Morgan, 160625	'The sweetest deal around'; Why warren buffett is one of the very few making money off alberta's mostly unprofitable electricity system	Morgan, Geoffrey
NP, Morgan, 160630	Oilpatch welcomes 'level playing field'	Morgan, Geoffrey
NP, Morris, 150805	Obama's clean calamity; Seven ways the U.S. Clean Power Plan will produce perverse results	Morris, Julian

NP, Morris, 150825A	Clean power's muddy economics; Obama's 'Clean Power Plan's' pessimistic projections fly in the face of real-world results	Morris, Julian
NP, Murphy, 150718B	A very refreshing premier	Murphy, Rex
NP, Murphy, 150919	Universal NIMBYism	Murphy, Rex
NP, Murphy, 151212	The High Church of Global Warming	Murphy, Rex
NP, Murphy, 151219	Where are the climate celebrations?	Murphy, Rex
NP, Murphy, 160208	Will it be Paris or Calgary?	Murphy, Rex
NP, Murphy, 160227	Burning the budget to heat the home	Murphy, Rex
NP, NA, 150717A	Do fossil fuels foul the air?	No Author Listed
NP, NA, 150928	Aykroyd comes face to face with extinction; Dinosaur Museum	No Author Listed
NP, NA, 150930B	7 curbs on carbon excess	No Author Listed
NP, NA, 151104B	The official National Post checklist of Justin Trudeau's 2015 election promises	No Author Listed
NP, NA, 151107D	Why Obama rejected KXL	No Author Listed
NP, NA, 151112	Impact will be 'negligible'	No Author Listed
NP, NA, 151119A	First, kill all the capitalists	No Author Listed
NP, NA, 151121A	McGuinty's viewpoint	No Author Listed
NP, NA, 151123	Alberta to implement carbon taxes	No Author Listed
NP, NA, 151124A	Alberta methane caps to hit hardest; Could add 'hundreds of millions' to climate tax bill	No Author Listed
NP, NA, 151125C	4 Things to know; Ontario climate plans shy on details	No Author Listed
NP, NA, 151127	Brad Wall: skeptic-in-chief	No Author Listed
NP, NA, 151201A	12 things to know about the climate talks	No Author Listed
NP, NA, 151202A	Oil firms, environmental groups make secret deal	No Author Listed
NP, NA, 151228C	We need a Plan B	No Author Listed
NP, NA, 160120	Trudeau embraces Davos plutocracy	No Author Listed
NP, NA, 160308	Petronas gives Ottawa LNG ultimatum	No Author Listed
NP, NA, 160324	Rockefeller family fund to sell Exxon, oilsands holdings	No Author Listed
NP, NA, 160618	TorStar's climate for kids	No Author Listed

NP, NA, 160624	Ev quotas will hurt sales of conventional cars	No Author Listed
NP, Ohlheiser, 160201	Conspiracy	Ohlheiser, Abby
NP, Oliver, 160204	Beware the consequences of climate change ... policies	Oliver, Joe
NP, Oliver, 160315	An official visit with a slap	Oliver, Joe
NP, Osborne, 151217	No justice in censorship; Ecojustice's Competition Act complaint against climate change skeptics is an invidious attempt to deprive people of freedom of speech	Osborne, Michael
NP, Payne, 150708	Lavigne shines light on Lyme disease; On the rise	Payne, Elizabeth
NP, Peter Foster, 1511014A	Canada's Innovation Bomb(ardier)s	Foster, Peter
NP, Peter Foster, 151106	Is Keystone now a real 'no brainer'	Foster, Peter
NP, Quan, 151125B	Suzuki denies targeting oil workers; Controversy; Compared oilsands to U.S. slave trade	Quan, Douglas
NP, Reevely, 160317	Brown's battle to sell carbon play to Tories	Reevely, David
NP, Rex Murphy, 160521	Leap comes to Ontario	Murphy, Rex
NP, Richarz, 160218	How the Saudis cornered Canada	Richarz, Allan
NP, Ridly & Peiser, 151201C	Your Complete Guide to the Climate Debate; At the Paris conference, expect an agreement that is sufficiently vague and noncommittal for all countries to claim victory	Ridley, Matt;Peiser, Benny
NP, Selley, 151113A	A double standard on science	Selley, Chris
NP, Selley, 151121B	Whitewash of past with faux 'regrets'	Selley, Chris
NP, Selley, 160229	Traits of a new Tory leader; Winner must articulate party's philosophy	Selley, Chris
NP, Siekierska et al., 150725	Hot, Dry & Disastrous; Western Canada's drought has harvests rotting, salmon dying, fires flaring	Siekierska, Alicja;Shore, Randy;Chabun, Will;MacPherson, Alex

NP, Solomon, 150814	Scientists are often bought; Governments pay scientists to produce results that suit their public policy agendas; corporations must then commission defensive studies	Solomon, Lawrence
NP, Solomon, 151030A	Stephane Dion's lesson for Trudeau; Countdown to paris	Solomon, Lawrence
NP, Solomon, 151218A	Solomon's uncanny scorecard	Solomon, Lawrenc E
NP, Solomon, 160226	Peak Oil theory goes to rehab	Solomon, Lawrence
NP, Solomon, 160610	Cracks in Big Labour's environmental alliance	Solomon, Lawrence
NP, Son & Lewis, 151208A	No Easy Sell; Businesses might want to power their factories differently, but it is consumers who ultimately make green decisions	Son, Emma Thomas; Lewis, Barbara
NP, Sunstein, 151001	The global warming wealth transfer; When it comes to the climate, our duty to poor countries isn't clear	Sunstein, Cass
NP, Thomson, 150717	Prairie pirate assails fellow premiers; Wall, Notley skirmish over pipeline policy	Thomson, Graham
NP, Van Geyn, 151124C	Wynne's jobkilling climate change scheme	Van Geyn, Christine
NP, Watson, 160512	Naomi Klein's inner Hayek	Watson, William

**C.D. Howe**

<b><u>Citation</u></b>	<b><u>Title</u></b>	<b><u>Authors</u></b>
CD, Dachis & Send, 150724	Deep-6 the High-5 Ontario electricity program: Financial Post Op-Ed	Dachis, Sen
CD, Bishop & Dachis, 151218	Stranding Canada's oil is no way to reduce carbon emissions: Financial Post Op-Ed	Bishop, Dachis
CD, Broadway & Dachis, 151007	A better way for Alberta to collect royalties: Calgary Herald Op-Ed	Broadway, Dachis
CD, Dachis, 160209	True test of Alberta royalty review will be its real world application: Edmonton Journal Op-Ed	Dachis
CD, Dachis, 160610	Ontario climate plan ignores the beauty of cap-and-trade - Globe and Mail Op-Ed	Dachis
CD, Dachis & Broadway, 150928	Alberta's royalty review is an opportunity to improve tax design: Globe and Mail Op-Ed	Dachis, Broadway
CD, Ragan, 150811	Smooth transition needed for carbon pricing and free trade: Globe and Mail Op-Ed	Ragan
CD, Ragan, 150922	Why carbon pricing will help to secure Alberta's economic future: Globe and Mail Op-Ed	Ragan
CD, Ragan, 151119	Carbon pricing can balance emissions reduction and competitiveness: Globe and Mail Op-Ed	Ragan
CD, Ragan, 151229	Emissions policy should focus on carbon pricing, not carbon targets: Globe and Mail Op-Ed	Ragan
CD, Ragan, 160210	Two blessings and a curse facing Alberta's oil industry	Ragan
CD, Ragan, 160525	The good news and the bad in Ontario's new climate legislation: Globe and Mail Op-Ed	Ragan

**Fraser Institute**

<u>Citation</u>	<u>Title</u>	<u>Authors</u>
Fraser, Green & McKittrick, 150708	A Tax Grab Cloaked in Green	Green, K.P., McKittrick, R.
Fraser, Green & Jackson, 150724	Premiers Must Make Up Their Minds on Energy	Green, K.P., Jackson, T.
Fraser, Ragan, 150811	Smooth transition needed for carbon pricing and free trade	Ragan, C.
Fraser, Green, 150819	Notley Cheers Oilsands While Climate Panel Plans Future Without it	Green, K.P.
Fraser, Green, 150904	Is the Keystone Kibosh Coming	Green, K.P.
Fraser, Green, 150910	An Adult Conversation About the Oilsands	Green, K.P.
Fraser, Eisen & Lammam, 15117	The Good, The Bad and The Ugly - Reaction to Morneau's 'Mandate Letter'	Eisen, B., Lammam, C.
Fraser, Green, 151118	When Green Labels mis-LEED	Green, K.P.
Fraser, Eisen, & Lamman, 151123	Carbon Tax Another Blow to the Alberta Advantage	Eisen, B., Lammam, C.
Fraser, Green & Jackson, 151124	Is Fracking Safe - Air Quality	Green, K.P., Jackson, T.
Fraser, Eisen & Lammam, 151125	Carbon Tax Another Major Blow to Alberta's Investment Climate	Eisen, B., Lammam, C.
Fraser, Watson, 151127A	Why I'm Voting Against Fossil-Fuel Divestment at McGill University	Watson, W.
Fraser, Eisen & Jackson, 151127B	Alberta's New Carbon Policies are not Revenue Neutral	Eisen, B., Jackson, T.
Fraser, Green & Jackson, 151130A	What will the Paris Climate Conference Actually Accomplish	Green, K.P., Jackson, T.
Fraser, Henderson, 151130B	Is 'Not Taxing' the same as Subsidizing	Henderson, D.
Fraser, Green & Jackson, 151201	Investor Perceptions of Alberta's Oil and Gas Policy Changes	Green, K.P., Jackson, T.
Fraser, Green, 151211	And the Pope Completes the Great Parisian Climate Show	Green, K.P.

Fraser, Green & Jackson, 160102	New Climate Tests for Pipelines are Unnecessary	Green, K.P., Jackson, T.
Fraser, Green & Jackson, 160108	Climate Change was a Weak Reason to Reject Keystone	Green, K.P., Jackson, T.
Fraser, Green & Jackson, 160111	TransCanada Lawsuit Spotlight Weak Climate Change Connection to Keystone	Green, K.P., Jackson, T.
Fraser, Green, 160202	Canada's New Greenhouse Gas Requirements will Inflict Widespread Pain	Green, K.P.
Fraser, Lamnam, 160321	With the Federal Budget Looming, Canadian Economy Faces Troubled Waters - Partially Self-Imposed	Lamnam, C.
Fraser, Green & Jackson, 160322	Troubled Waters Ahead for Canadian Energy Development	Green, K.P., Jackson, T.
Fraser, Green, 160420	Premier Notley Should Stop Pandering for 'Social License' and Practice Energy Pragmatism	Green, K.P.
Fraser, Green, 160504	Gloomy Report Misrepresents Canada's Environmental Performance	Green, K.P.
Fraser, Di Matteo, 160517	Ontario Embarking on Road to Massive Economic Change and Uncertainty	Di Matteo, L.
Fraser, Eisen & Green, 160524	Carbon Pricing, Plus More Regulation, Equals Bad News for Ontario's Economy	Eisen, B., Green, K.P.
Fraser, Green & Eisen, 160531	Ontario's Climate Action Plan Undermines Case for Cap and Trade	Eisen, B., Green, K.P.
Fraser, Green, 160601A	Government Report Reads Like More Environmentalist Wishful Thinking	Green, K.P.
Fraser, Green, 160601B	Alberta's Carbon Tax - A \$10 Billion Green Grab	Green, K.P.
Fraser, Hodgson, 160607	Book Targets Policies and Policymakers Amid Alberta's Malaise	Hodgson, F.
Fraser, Green, 160608	Shifting Climate Policy Focus - From Mitigation to Adaptation	Green, K.P.
Fraser, Green, 160622	A Federal Carbon Tax - A Cash Grab that Could Damage the Economy	Green, K.P.
Fraser, Eisen & Jackson, 160624A	Ontario's Climate Change Strategy - More Taxes, Spending and Economic Micromanagement	Eisen, B., Jackson, T.
Fraser, Eisen & Jackson, 160624B	Ontario Climate Action Plan - Subsidizing Electric Cars is a Costly Approach to Emissions Reduction	Eisen, B., Jackson, T.

Fraser, Green &  
Jackson, 160627

Climate Change Plan Another Blow to Ontario's  
Competitiveness and Consumers

Green,  
K.P.,  
Jackson,T.

Fraser, Green, 160630

Three Amigo Climate Agreement - The Good and the  
Not-So-Good

Green,  
K.P.

## Appendix B – Coding Guide

### First pass coding

- All coding – Frames, Claims, Voice
  - Coding Units
    - Sentence (also, partial sentences in cases where there is an obvious split between two codes in one sentence)
    - Multiple sentences strung together
    - Complete paragraphs
  - Scan carefully line by line to ensure that nothing is missed.
    - Consider how you might defend each coding decision using this guide.
    - If your question is not clearly answered by the guide – note it, in order to update any gaps in the guide
- Thematic Frames
  - Code up to 2 thematic frames
    - 2 at max, try to keep it to 1
      - Only two if you cannot make a judgement call
    - Begin by reading through the entire article
    - Ask yourself “what is the article fundamentally about?”
    - Themes are not ‘just mentioned’ they ‘frame’ the story in the article
      - Stories are told through the viewpoint of grand narratives
        - What is the grand narrative that is being used to tell this story?
      - Other themes in the article will be discussed within the ‘frame’ of the primary theme
        - E.g., Primary theme – Policymaking; Secondary – Economics
          - The article may be crediting/attacking policymakers for choices regarding the economics of certain policies
          - E.g., Primary theme – Economics; Secondary – Policymaking
            - The article spends most of the time discussing economics of energy/mitigation measures. Policymaking may be highlighted in this discussion as an influential factor of the economics
  - In NVIVO
    - Code a paragraph/sentence or two that best represents each theme
      - Because the entire article encompasses the theme(s) (unless there is a small section that captures a third or fourth theme)
      - Cannot note difference between primary and tertiary themes in NVIVO

- This will be done in XL Spreadsheet instead
- Reflexive and Anti-Reflexive Claims
  - Claims and positions of individuals, institutions, and/or documents
  - Only comments related to climate change or energy issues in general
  - Journalist contradicts their source - Is the comment Anti-Reflexive or Reflexive?
    - Base your decision on the voice attached to the claim (i.e., paraphrased, quoted, or the authors voice)
      - E.g., person (A) quoted in the article agrees with regulation – but the author (B) does not:
        - Code (A) as “Promoting Regulation”
        - The next line (from the author who disagreeing with regulation) would then be quoted as “Anti-Regulation”
        - However, if the author is providing a ‘sarcastic’ presentation of someone’s positive view of regulation – code this as ‘Anti-Regulation’
          - B/C the author’s voice is the one that is ultimately coming through in the sentence.
          - This is further outlined below in ‘Sarcasm and Irony’ bullet
      - Reasoning – Despite author’s disagreement, they are providing the other side of the story. This specific act is fair, even if they go on to present falsehoods thereafter
  - Code for as many claims as appear in the article – up to all 9 of them
    - But each individual claim need only be coded once per article.
      - Therefore, if ‘claims of manufacturing uncertainty’ appears four times in one article, it only needs to be coded once to show that it is present in the article
    - An article may contain both reflexive and anti-reflexive claims
      - This is not problematic
        - If it occurs, it will likely happen due to multiple sources with different positions being referenced within the article
      - Highlight the passages that capture these codes as well in Microsoft Word for later comparisons
        - Lead coder only
  - Mutually exclusive codes
    - Where one sentence weaves multiple claims together that cannot be separated without rendering the sentence meaningless.
      - Code the dominant claim only
    - Where one sentence combines multiple codes together that can be separated out
      - One is reflexive, and one is anti-reflexive
        - Cut up sentence and code all claims
      - Both are reflexive, or both are anti-reflexive
        - Typically - Code the dominant claim only

- Unless the claims are clearly separated in the sentence
  - Sarcasm and Irony
    - Where sarcasm is expressed in a sentence
      - Code from the author's point of view
        - What is the sarcasm trying to express?
        - Watch out for 'qualification' of an author's perspective/position prior to quotes or paraphrases
          - This should be the primary determinant on whether to code from an author's point of view
      - Do not code from the author's perspective if they are providing voice to another (expressing the 'other's position) in a definitive way (without author's qualification)
        - Re-iterates point above

### **Reflexive**

- Explicit claims only
  - Do not code passages that have these claims underlying or implied.
    - Looking for direct claims (or extremely close to) of things such as "scientists disagree on the causes of climate change" or "are unsure about the causes of climate change"

### **Anti-Reflexive**

- Explicit and Implicit claims
  - What is the author getting at?
  - What is the purpose of including a particular line?
- Inductive Method
- (A) Paraphrased or quoted individuals and institutions
- (B) Only comments related to climate change (manifestations, effects) or energy issues.
  - Passages regarding issues do not have to be climate change specific for capturing voice
    - Reasoning - I'm looking to catalogue the main voices regarding energy systems
- (C) Individuals/Institutions whose position on the subject is mentioned or described
  - Not necessarily who the article is talking about
  - Unless they are being paraphrased, quoted, or their position on the subject is mentioned/described.
- Two Categories:
  - (1) Individual
  - (2) Institution
- Capture all voices in each article - As long as they meet criteria (A) (B) (C)
  - Previously had up to 4: 2 individuals and 2 institutions
    - Found that most articles only have an additional two or three of each (at a maximum)
    - Makes more sense to capture all of the voices for now
    - The role of each voice in the articles (i.e., dominate voices, or used by the author to attack, and so on) would be better analysed in the next stage of more qualitative (largely descriptive) analysis

- Does the author count as a ‘voice’?
  - Yes if,
    - Author takes an obvious ‘anti-reflexive or reflexive’ position.
      - I.e., clear bias expressed in the article
    - Article is an editorial or commentary
- Institution
  - Only to be used if the statement is coming from the institution itself, or someone speaking on behalf of the institution (e.g., government officials speaking from their government position)
    - Do not capture if the institutional affiliation of an individual is mentioned for the purpose of clarifying who they are, or what their expertise is
  - Watch for the positions of political parties
- Individuals speaking on behalf of an institution
  - Capture both the individual and the institution
- No ‘primary’ and ‘secondary’ qualification
  - Problematic distinction
    - Difficulties following from this distinction outweigh gains derived from applying it

**Content Coding Guide**  
**COMPON Thematic Frames**

1. Ecological/meteorological

- Focus on the natural environment, including climate change impacts on animals or vegetation, or on weather events and patterns

2. Policymaking and Politics

- Focus on government policy responses and political debate
  - Politics of climate change and energy
  - May discuss existing policies
  - May recommend the need for new policies
- Civil society
  - Focus on public opinion or activities by non-governmental organizations (e.g., environmental campaigns and protests)
  - Now a sub-node of Policymaking and Politics
    - This decision was made b/c public opinions or activities are always seeking to influence policymaking
      - Therefore, Policymaking code almost always appears along with Civil Society code. This continual overlap demonstrates that two codes are capturing the same thing.

3. Economic and energy interests

- Focus on the economic costs (or opportunities) of climate change impacts and responses, or climate change as it relates to energy production, and energy production interests

4. Culture

- Focus on individual lifestyle in relation to climate change, or on popular culture (tradition, religion, movies, books, celebrities, music, fashion) in relation to climate change

5. Science and technology

- Focus on scientific findings/discussion and communication, or on the development and application of new technologies.
  - No distinction here between correct and incorrect science

## Reflexive Claims and Actions

### 11. Arguing for Validity of Scientific Literature

- Passages that directly assert scientific certainty regarding existence and cause of global climate change
  - Clarify that no uncertainty exists regarding the existence of global climate change and the role of humans
  - Does not include implicit statements
    - E.g., The number of superstorms hitting the east coast is predicted to increase due to climate change.
      - Implies that climate change literature is valid but does not explicitly state that
- Explicit mentions (i.e., direct statements)
  - These include instances where climate change denial is countered.
  - This may seem problematic later when comparing reflexive and anti-reflexive claims, but it could be (arguably) assumed that articles that do not have claims/frames of uncertainty and outright denial, implicitly accept the science

### 12. Recognizing Impacts on Environment and Subsequent Impacts on Other Issues

- Passages that discuss impacts and risks of climate change
  - Includes recognizing the role of environmental problems in causing/exasperating other social problems:
    - Infrastructure damage
    - Malnutrition and access to water
    - Economic systems
    - Energy systems
    - Violence and war

### 13. Promoting Regulation and Corporate Liability

- Passages saying the government should (or was right to) restrict industries or individual from damaging ecosystems and/or threatening wildlife
- Passages saying that institutions (including other corporations) should (or were right to) penalize “bad actors” who do not attempt to limit actions that damage ecosystems and/or threaten wildlife
  - Especially action to reduce emissions
  - Individual corporations or industry as a whole
  - Can include specific policies or general statements
  - There may be a lot of contradictory statements where an actor will say that we have to do something to reduce greenhouse gases in one sentence, but then condemn a regulation that would carry it out in the next sentence
    - Code them both
- May Include:
  - Support for "studying" the effects of a proposal by a pipeline company
  - Statements supporting a carbon tax or a market-based carbon mechanism

- General talk of treaties with goals – with/without mandates
- Discussion of a climate change agenda
- Lawsuits over Indigenous rights that seek to limit pipeline expansion or resource extraction
- Positive support for alternative energy in the form of incentive or tax breaks

#### 14. Questioning the Idea of Socio-Historical ‘Progress’ Considering the Environmental Impacts of the Current Trajectory

- Passages that question the viability of our current capitalist economic structure.
  - Is this current economic system viable? Whether it is worth the environmental destruction?
- Aim to code the more ‘explicit’ passages
  - This will avoid misinterpreting implicit assumptions
- E.g., Naomi Klein argues in *This Changes Everything*:
  - “Any attempt to rise to the climate challenge will be fruitless unless it is understood as part of a much broader battle of worldviews,” Klein writes. “Our economic system and our planetary system are now at war”

## Anti-Reflexive Claims and Actions

### 15. Scientific Uncertainty

- Stresses the ‘uncertainty’ of the science concerning global warming and the role human beings in manifesting AGW
  - Doesn’t necessarily deny it outright, but doesn’t accurately represent the dominant consensus
  - E.g., ‘Dualing scientists’ frame argues that scientists are still debating (a)whether AGW is happening or (B) if we’re the cause of it
- Rejects of the science concerning global warming and human contributions to it
- Discusses scientific work that contradicts the dominate consensus
- Deniers allege that environmental science has become corrupted by political agendas (i.e., ideology) that lead it to unintentionally or maliciously fabricate or grossly exaggerate these global problems
- Use terms like:
  - Hysterical
  - Alarmists
  - Warmists
  - Junk Science
- Do not code issues of uncertainty where scientists disagree on highly specific sub-topics of climate science (i.e., normal scientific debate regarding climate change) unless they are being used specifically to undermine the dominate consensus

### 16. Prioritizing other pre-existing problems (social, economic) over environmental ones

- Argues that pre-existing economic (e.g., poverty), and social (e.g., immigration) problems “should” take precedence over climate change issue specifically.
  - i.e., problems that take precedence over climate change and should be dealt with first
  - Does not include passages that claim adaptation/mitigation will cause problems (those belong in “Environmentalism as a threat to social progress”)
  - Does include passages that claim adaptation/mitigation will add to (by drawing resources away from) existing social and economic problems
- Issues that should be dealt with first may include:
  - Jobs
  - Starvation
  - Disease
  - Global conflict
- Primary difference between this frame and the ‘threat to social progress’ frame is that passages framed here specifically mention pre-existing economic (e.g., poverty), and social (e.g., immigration) problems that “should” take precedence.
- Since sceptics see few, if any, environmental problems as serious, they view most environmental protection efforts as illegitimate
- Warns: ‘When we are told that something is a problem, we need to ask how important it is in relation to other problems

- We are forced to constantly prioritize our resources, and there will always be good projects we have to reject

#### 17. Anti-regulation and Anti-Corporate Liability

- Contains an antiregulatory message or admonition
  - Looking to capture statement of anti-regulation or anti-corporate liability
  - Possibly asserting that a particular policy or regulatory perspective or program should be reversed or opposed because it is based on uncertain science or junk science

#### 18. Environmentalism as a Threat to ‘Social Progress’

- Passages asserting that environmentalism and environmental protection is a threat to the progress and development (i.e., growth)
  - Fossil fuels are necessary for continual growth – rich and poor countries alike and environmentalism threatens this
  - Passages that assert we should maintain the status quo – production and consumption must continue - against the threat of environmentalism.
    - Argues that this will ‘raise all boats’ and that environmentalism will sink all boats
- Highlights economic Costs and impacts of responding to climate change
  - Technology, through the marketplace has made life substantially better for most of humankind
    - Removing fossil fuels from society would see the reverse of all the progress that has been made (e.g., medicine, food supplies, shelter)
- Argument lines up directly with ‘dominant social paradigm’ and/or ‘manifest destiny’
  - Sceptics see a ‘fantastic story of mankind’ where ‘In the course of the last 40 years, everyone – in the developed as well as the developing world – has become more than three times richer’. Consequently, sceptics strive to defend modernity from environmentalists, who are portrayed as waging a ‘war against progress’

#### 19. Diversionary Reframing

- Attempting to divert attention away from an uncomfortable question by trying to reframe the debate as being about something else.
  - Look for these specifically:
    - (A) The failure of other nations to reduce carbon means we should also abandon efforts to reduce carbon.
    - (B) “Climate treaties are futile”,
      - “No one is signing them”
      - “Those nations that do sign are not going to abide anyway”
    - (C) Ethical oil argument – “Canada’s oil is ethical bc this country is more ethical than others like Saudi Arabia.”
    - (D) Uses manipulative numbers
      - “Relative reductions” as opposed to “Absolute reductions”

- (E) Climate change concerns are really just proxies for something else
        - Aboriginal rights
        - Wealth distribution
- Error on the side of caution, be conservative with this measure.
- Examples
  - (A)+(B) – Failure of Others and Treaties are Futile
    - “First, a binding international agreement that doesn't include developing countries - such as the Kyoto Protocol - will do nothing to curb GHG emissions. Emerging countries' emissions are growing and are expected to represent 66 per cent of world emissions in 2020. We also know that emerging countries will never commit to stringent GHG reduction targets”
  - (C) Ethical Oil Argument
    - “The point is a simple one: that people shouldn't focus just on environmental concerns. If they also considered human rights, political freedom and other socio-economic issues when deciding whether to criticize a particular source of oil, they wouldn't be so quick to criticize the oil sands – indeed, they should embrace the Canadian alternative”
  - (D) Manipulative Numbers
    - "The strongest environmental language in a draft version of the strategy obtained by The Globe earlier this week committed the provinces to "actively pursue absolute GHG emissions reductions." But the term "absolute" was later cut from the strategy
    - "The distinction is important: Absolute emissions reductions are the international standard, but Alberta instead uses a different method for setting emissions targets that allows emissions to continue growing. Federal data show Alberta's emissions have grown 53 per cent since 1990”
  - (E) Concerns are Proxies
    - “Instead, he worries that pipelines have become proxies for bigger issues like climate change policy and aboriginal reconciliation that should be dealt with elsewhere, and that the proposed reforms will deepen animosity between regions, different levels of government, project proponents and opponents”

### Appendix C – Intercoder Reliability Tests

		Intercoder Reliability Total			
		Lead Researcher			
		0	1		
Assistant	0	187	12	199	70.82%
	1	23	59	82	29.18%
		210	71	281	
		74.73%	25.27%		
$k = (Pr(a) - Pr(e)) / (1 - Pr(e))$					
		Pr(a)	0.88		
		Pr(e)_	0.60		
		K	<b>0.69</b>		

		Thematic Frames Total			
		Lead Researcher			
		0	1		
Assistant	0	72	4	76	76.00%
	1	3	21	24	24.00%
		75	25	100	
		75.00%	25.00%		
$k = (Pr(a) - Pr(e)) / (1 - Pr(e))$					
		Pr(a)	0.93		
		Pr(e)_	0.63		
		K	<b>0.81</b>		

		Reflexive Frames Total			
		Lead Researcher			
		0	1		
Assistant	0	51	3	54	66.67%
	1	4	23	27	33.33%
		55	26	81	
		67.90%	32.10%		
$k = (Pr(a) - Pr(e)) / (1 - Pr(e))$					
		Pr(a)	0.91		
		Pr(e)_	0.56		
		K	<b>0.80</b>		

		Anti -Reflexive Frames Total			
		Lead Researcher			
		0	1		
Assistant	0	64	5	69	69.00%
	1	16	15	31	31.00%
		80	20	100	
		80.00%	20.00%		
$k = (Pr(a) - Pr(e)) / (1 - Pr(e))$					
		Pr(a)	0.79		
		Pr(e)_	0.61		
		K	<b>0.46</b>		

\* Results of the third intercoder reliability test

\*Based on a sub-sample of 20 articles