



# **Symbolic coping in Canada's coal phaseout**

- Applying social representations dynamics to communities in transition

---

Linda Varekamp

Master thesis • 30 credits

Swedish University of Agricultural Sciences, SLU

Faculty of Natural Resources and Agricultural Sciences

Department of Urban and Rural Development

Environmental Communication and Management - Master's Programme

Uppsala 2021







## Abstract

The Canadian federal government has introduced policy to phase out coal-fired electricity generation by 2030, as part of its climate change mitigation commitments under the Paris Agreement. The policy plan, positioned as a *just transition*, includes funding and measures to help workers and communities manage economic difficulties arising from the coal phaseout. Sustainability transitions, however, are rarely a purely economic process, as changes in demographics, values, norms and meanings may also ensue. Understanding this process as one of *symbolic coping*, wherein coal communities must socially come to terms with the phaseout and the resulting threat to their identities, adds another dimension to the just transition concept.

This study aimed to better understand the social-psychological processes of sense-making in sustainability transitions, by investigating how coal communities are understanding and coping with the coal phaseout, and how social representations of the coal industry are transforming as a result. Social representations theory (SRT) was the main conceptual framework used, as it explores group-level common-sense understandings, which can be useful in analyzing processes of disruption or transition. Through qualitative case study research in two coal producing communities in Saskatchewan, one of four Canadian provinces affected by the coal phaseout, I explored the dynamics of the social representation of the local coal industry. Using the central core approach to SRT, I identified a core element based in shared history, stability and prosperity, which seemed to provide a foundation for making sense of the coal phaseout policy. From this foundation, I found two models of social representation transformation, *resisting* and *progressive*, implicating a split in the social representation of community life after coal. With this theoretical application, I explored social implications of the Canadian coal phaseout, illustrated a model of social representation transformation, and demonstrated a framework that can be applied to transition research in other contexts. I also discussed potential governance implications for designing just transition policies.

*Keywords:* just transition, resistance, transformation, social representations theory, structural approach, central core

# Table of contents

<b>1. Introduction.....</b>	<b>9</b>
1.1. Background .....	9
1.2. Problem Formulation .....	11
1.3. Research Aim and Questions.....	12
<b>2. Theoretical Framework .....</b>	<b>14</b>
2.1. Social Representations Theory .....	14
2.2. Applications in Sustainability Transitions .....	15
2.3. Social Practices .....	17
2.4. Central Core Theory .....	17
<b>3. Methods .....</b>	<b>20</b>
3.1. Research Design .....	20
3.2. Study Location .....	20
3.3. Data Collection .....	22
3.4. Data Analysis.....	23
3.5. Methodological Reflections.....	24
<b>4. Findings.....</b>	<b>25</b>
4.1. Defining the Central Core .....	25
4.2. Dynamics of Transformation.....	27
4.2.1. Resisting transformation .....	28
4.2.2. Progressive Transformation.....	32
<b>5. Discussion.....</b>	<b>36</b>
5.1. Interpreting the Findings with SRT .....	36
5.2. Implications for transition governance.....	41
5.3. Further research .....	43
<b>6. Conclusion .....</b>	<b>44</b>

## List of tables

Table 1: Coal mines and power generating facilities in Saskatchewan.....	22
--	----

## List of figures

Figure 1: The transformation process: two overlapping models .....	28
Figure 2: The transformation process: division of social representations .....	39

# Abbreviations

CCS	Carbon Capture and Storage
GHG	Greenhouse Gas
SLU	Swedish University of Agricultural Sciences
SRT	Social Representations Theory
JFT	Just and Fair Transition for Canadian Coal Workers and Communities
MLP	Multi Level Perspective
PPCA	Powering Past Coal Alliance



# 1. Introduction

## 1.1. Background

Recognised as one of the most intensive sources of greenhouse gas (GHG) emissions and a major contributor to climate change to date (IEA 2019)<sup>1</sup>, countries around the world have pledged to phase out the use of coal-fired electricity generation, in order to meet their climate change mitigation obligations under the Paris Agreement. Accounting for approximately 37 percent of current global electricity generation (Ritchie 2020), coal is the most GHG intensive source of electricity, with life-cycle emissions up to two times greater than natural gas, and over four times greater than nuclear or renewable sources (Turconi et al. 2013)<sup>2</sup>. The Powering Past Coal Alliance (PPCA), consisting of 36 national governments, seeks to accelerate the phaseout of unabated<sup>3</sup> coal power generation around the globe (PPCA 2017). In order to meet the Paris Agreement targets, analysis shows that coal power must be phased out no later than by 2030 in OECD and EU countries, and no later than by 2050 in the rest of the world (Climate Analytics 2016).

Canada is one of the founding members of the PPCA, with approximately 7 percent of the country's total electricity currently coming from coal (Natural Resources Canada 2018). In 2018 the federal government passed amendments to its coal-fired electricity generation regulations, which require all coal power plants to shut down by December 31, 2029, unless retrofitted with Carbon Capture and Storage (CCS) technology (Canada Gazette Part II 2018). Electricity generation in Canada is a provincial responsibility, and several provinces have already phased out, or have

---

<sup>1</sup> CO<sub>2</sub> emitted from coal combustion was found to be responsible for over 0.3°C of the 1°C increase in global average annual surface temperatures above pre-industrial levels, making coal the single largest source of global temperature increase.

<sup>2</sup> The life cycle emissions factors (in kg of CO<sub>2</sub> equivalent per MWh) for various electrical energy sources were calculated as follows: hard coal: 660-1050, natural gas: 380-1000, nuclear: 3-35, hydro: 2-20, wind: 13-190, solar: 13-190.

<sup>3</sup> Unabated means electricity generated without the use of Carbon Capture and Storage (CCS) to reduce emissions released into the atmosphere.

begun to phase out coal before these regulations came into place. Currently, there are four (out of 10) provinces that generate a portion of their electricity supply from coal, including Alberta and Saskatchewan in the western prairie region, and New Brunswick and Nova Scotia in the eastern maritime region of Canada.

The impacts of a transition away from coal are of particular interest in the western provinces of Alberta and Saskatchewan, with economies that have traditionally been reliant on resource-based economic activities, such as oil and gas extraction, mining, and agriculture. There is a long and complex history of tensions between Canada's federal government and the Western provinces, who have seen themselves as the economic engine of Canada and are now facing increasing economic, social and political pressures due to the movement towards energy transition (Wyeth 2020). The coal phaseout is just one of several sources of environmental struggle in this region, where resistance movements have formed in response to economic hardships within the oil and gas sector, difficulties approving pipeline infrastructure, and a federally mandated price on carbon (Dawson & Forrest 2018; Blewett 2019; WEXIT Movement 2020).

Acknowledging the economic impacts in these provinces, the amended federal regulations are part of a larger program, which the government positioned as a "Just and Fair Transition for Canadian Coal Power Workers and Communities" (JFT). This program includes funding for affected workers and communities, as well as an independent Task Force, which consulted with coal communities and provided a number of recommendations to help to mitigate the affects of the phaseout (Canada 2019b; a; Environment and Climate Change Canada 2019).

The term "Just Transition" emerged in the 1970s by North American labour movements to respond to job losses and other labour disruptions precipitated by governmental air and water pollution regulations (Healy & Barry 2017). The concept is now increasingly associated with transition to low- or zero-emissions energy, and was included as an imperative in the Paris Agreement (United Nations 2015). While the term has developed various definitions and scopes dependent on its context (Heffron & McCauley 2018; Galgóczi 2020; Pinker 2020), according to the JFT Task Force, "Just Transition means that society shares the costs of transitioning to a low-carbon economy," and that "It would be unjust for workers and communities in affected sectors to shoulder the full cost of transition" (Canada 2019a).

The Canadian coal phaseout plan has emphasized the economic aspects of just transition, focusing on economic diversification, retraining of workers and transition to retirement programs (Canada 2019a). Through the Task Force consultations, the plan has also emphasized communication and collaboration,









producing communities are not only coming to terms with a technical and economic transition, as coal is replaced with new energy sources and other types of employment, but they are also navigating a social transition, as they grapple with a shift in the meanings, traditions and identities associated with the coal industry.

## 2.2. Applications in Sustainability Transitions

SRT is increasingly being applied in cases of disruption related to sustainability transitions. As mentioned in my Introduction, Upham et al. (2015) had highlighted that transition literature was lacking in psychological perspectives. They sought to address this by combining SRT with the Multi-Level Perspective (MLP), a common framework used in the study of socio-technological transitions, to explore how media representations of fracking-derived shale gas exploration have evolved and differed between countries. The same theoretical framework was later used to study how the rise of anti-nuclear sentiment within the German public following the Japanese Fukushima disaster, led to a total nuclear phaseout in Germany (Upham et al. 2020). In another approach to transition research, Bertoldo and Castro (2019) used SRT in combination with the socio-cognitive approach to developing social norms, to analyze various ways in which new environmental conservation laws in Portugal progressively became incorporated into societal norms and communicative practices. While these three studies used different concepts within SRT and/or combined them with other theoretical concepts, they all portray some kind of disruption, whether instigated by a technological innovation, a nuclear disaster, or an environmental policy, followed by a process of symbolic coping, as social representations helped groups make sense of the disruptive phenomenon.

In this way, sustainability *transition* can be seen as a driver of social representation *transformation*<sup>5</sup>, as meaning evolves or shifts both within and across social groups. Just as social representations are deeply informed by their historical legacy, they are always being contested, evolving and adapting to new conditions (Bauer & Gaskell 1999; Marková 2003; Wachelke 2012). The above cases help to illustrate the myriad ways transformation might occur, whether gradually or abruptly, partially or fully, or somewhere in between. In the first case described above, transformation was seen as an evolution of the public debate, which differed based on the cultural context, with various metaphors or objects gaining traction to help make the new phenomenon of fracking more familiar (Upham et al. 2015). The second case took a similar approach to understanding transformation, implying that

---

<sup>5</sup> In this work, I will refer to *transition*, to speak about governance-driven processes of sustainability or energy transition, such as the Canadian coal phaseout policy. I will use the word *transformation* to refer to the process of social change, especially as it relates to social representation transformation.

the processes of familiarization coupled with cultural/historical context enabled a latent anti-nuclear representation to gain hegemonic status within the larger public discourse (Upham et al. 2020). In the third case, concepts of self-image and judgement of others were related to social values, in order to explain the extent to which conservation ideas and behaviours, initially proposed by laws, become appropriated or consensual across groups (Bertoldo & Castro 2019).

In all of the above cases, the rate and extent of transformation seemed to be related not only to the material characteristics of the disruption, but to the *implication* of the disruption on the social group under study, with contextual factors of history, culture and identity playing a significant role in how meaning becomes constructed and transformed. In this way, symbolic coping is not only a process of meaning making, but also involves the protection of identity and preservation of self-esteem. It has been argued that social representations “emerge precisely in response to danger to the collective identity of the group, and consequently, a central purpose of a representation is to defend against feeling threatened” (Moscovici 1976 see Joffe 2003:66). Understanding the relationship between cultural identity and transformation then, seems to be a key aspect of the symbolic coping process.

The process by which social representations emerge, develop and transform is also an inherently political process, characterized by power, inequality, resistance and conflict, as groups, special interests and institutions struggle to constitute social reality (Elchereth et al. 2011). Often there exist a number of social representations within a cultural arena, some more hegemonic or widely accepted than others (Jaspal et al. 2014; Bertoldo & Castro 2019). Struggles of meaning may arise when social representations change in status, for example when controversial or polemic representations such as conspiratorial thinking compete with mainstream scientific consensus (Jaspal et al. 2014). In the case of the coal phaseout, the Canadian government has introduced its policy on the basis of scientific data, transnational policy trends, and a broad representation on the need for climate action within the Canadian public. While the social representations within coal communities may differ from the representations that have given rise to the policy, they are likely to experience internal transformation as a result of the disruption brought about by the policy. In this way, meaning can be understood as constituted both within group-level social representations (e.g. within coal communities), as well as in the interactions between them, on a larger societal scale (e.g. within Canadian governance processes).



## 2.3. Social Practices

As social representations impact both thoughts and actions, a key concept is the *practices* associated with an object of representation. The concept of social practices has been interpreted in various ways, but broadly refers to behavioural systems or actions, whether physical or discursive, that are socially legitimated (Flament 2001 see Wachelke 2012). It has been suggested that social representations can enter society either *transcendently*, without associated practices – for example, in the case of a new law, or *immanently* - emerging from practices in a more bottom-up fashion (Harré 1998 see Castro & Batel 2008). The “value-action gap,” a common psychological concept in environmental campaigns (Effectiviology n.d.), would be an example of a transcendent representation, wherein an ideal exists but practices fail to live up to it. Understanding how representations and practices are related can help to conceptualize the dynamics of transformation, which I will explore in more detail in the following section.

## 2.4. Central Core Theory

Within SRT, there exists a number of different approaches and concepts to aid in the understanding of representations (see Rateau et al. 2011). In order to gain insight into how coal communities navigate the process of symbolic coping, I will focus on the structural approach to SRT, which is often used to investigate the relationships between the contents and dynamics of a representation (Wolter 2018). Within the structural approach, the *Central Core Theory* contends that a social representation is made up of two main systems: a *core* and an ensemble of *periphery* elements (Moliner & Abric 2015). While social groups share many commonalities, they are also characterised by differences and variations in values and ideas about the world. People are often members of several different overlapping groups and subgroups, and boundaries between groups may not always be clear cut (Bauer & Gaskell 1999). Understanding a social representation as comprised of both a core and periphery can help delineate commonalities that define a social group, as well as explore variations and divergences within the group, especially in times of instability and change.

According to this theory, the core system of a representation is the held in common by the group, and is where many shared values and forms of knowledge are constituted. Central core theory, in the strictest sense, defines a social representation by its distinct core elements - that is, two different core systems would comprise two representations. In some cases, however, elements of core systems may be similar between representations, or overlap with the peripheries of other representations (Moliner & Abric 2015). According to Abric (1993), the core is

characterized by stability, consensus and homogeneity, as it is linked to the collective memory and social norms of the group. The core is slow to change, and not very sensitive to the immediate context, but functions to provide consistency to the representation and determine its organization. Abric further explains that the core system is responsible for bringing a sense of significance, or meaning associated with an object, to a social representation.

The peripheral system on the other hand, is where intragroup heterogeneity can be found, as well as flexibility, adaptability and responsiveness to change. Abric argues that the periphery allows for the integration of individual experiences and practices, and supports contradictions within the group. In addition, the periphery is far more sensitive to the concrete reality of the moment, which is important when exploring the affect of disruptive events, such as the coal phaseout. Together, the dual structure of the core and periphery provides a balancing function, enabling group members to preserve consensus of meaning, while allowing for flexibility for individual divergences (Moliner & Abric 2015).

The dual structure also helps to explain the dynamics by which a social representation adapts to change. Because the peripheral system is much more flexible and responsive, it serves a protective function by absorbing and contextualizing new, potentially contradictory information without challenging the core, acting as a sort of car bumper (Flament cited in Abric 1993). For example, a social representation of climate change that understands climate change impacts to be temporally and geographically distant, might experience disruption if a climate-related event such as a forest fire occurs nearby. While a temporary or partial change in values and practices may occur at the level of the periphery as the threat is perceived to be more urgent, other peripheral responses might rationalize the disruption as a one-off or unrelated event, and the core understanding of climate change as a far-away problem may persist within the social group at large.

At times however, a particularly significant event may challenge or transform a social representation, if it has profound implications for the shared history of the group, if it gives rise to new adaptive social practices, and if both the event and new practices are perceived as permanent and irreversible (Abric 1993; Guimelli 1993). Similar to the concept of immanent representations (Castro & Batel 2008), a significant event is conceptualized as imposing changes in practices, rendering those practices incompatible with the social representation, leading to a process of transformation (Flament 1994, 2001 see Wachelke 2012). In the climate change example above, if the event enables mobilization practices, such as political activism and/or behaviour change, to become sustained in a more durable way, perhaps in combination with other related events or information, the core system

could become transformed, towards an understanding of climate change as an issue of immediate and local concern, in need of resolute action.

In this way, while peripheries are flexible and constantly adapting to new information, a representation may only truly become transformed if the core is transformed, leading to a change in meaning associated with the object of representation (Wachelke 2012; Moliner & Abric 2015). Abric and Flament thus propose three possible types of transformation, all of which involve the ramifications of new practices on the significance of the core system:

- *resisting transformation* wherein new practices are contradictory to the core, but such contradictions can, for a time, be managed by the periphery. While peripheral defence mechanisms such as interpretation, justification and rationalization serve to protect the core, Abric and Flament suggest that the multiplication of these mechanisms over time eventually leads to transformation of the core, thus the representation as a whole;
- *progressive transformation* wherein new practices are not entirely contradictory, and can be progressively integrated into the core, without rupture or even in a manner that enriches the core. In this model, new practices become merged into the core, and/or the core reorganizes to accommodate the new information;
- *brutal transformation* wherein new practices cannot be absorbed by the peripheral system or managed by its defence mechanisms, and thus directly challenge the significance of the core and profoundly transform the representation (Abric 1993, 1996; Moliner & Abric 2015).

These three models conceptualize increasing levels of integration of new information and practices into the core system, thus transforming the social representation in various ways. While empirical research (especially in English) employing these models seemed to be difficult to find, I was able to refer to studies that had applied the concept of social representation transformation to understand dynamics in representations of topics such as automatic speed controls on vehicles (Pianelli & Saad 2016), HIV/AIDS (Oliveira 2013) and blood donations (Guarnaccia et al. 2016).

With its conceptualizations of stability, variation and transformation of social representations, central core theory seems well suited to study processes of symbolic coping related to sustainability transitions, such as Canada's coal phaseout. By analyzing the structural components of the social representation of the local coal industry, as well as the processes and dynamics through which this representation transforms, I aim to gain a deeper understanding of how coal communities in Canada are making sense of the phaseout policy.

## 3. Methods

### 3.1. Research Design

In order to gain a comprehensive understanding of the socio-cultural aspects of transition in the context of the Canadian coal phaseout policy, I have chosen a qualitative case study design for my study, focusing on coal producing communities in the province of Saskatchewan. Approaching my research from a relativist, constructivist worldview, I understand that people “engage with the world and make sense of it based on their historical and social perspectives” (Creswell & Creswell 2018:49). While the coal phaseout has real material implications for the economics and lived experiences of people in coal communities, it also impacts the ideologies, thought-patterns and practices that together constitute a sense of social reality. In this way, the primary motivation of my research is to develop an intensive understanding of the social impacts of the coal phaseout, based on the views and understandings of my study participants. In line with a qualitative design, I chose to conduct semi-structured interviews to gain in-depth, nuanced insights into my topic, taking into account a variety of diverse perspectives. While my sample size was smaller than if I had done a survey or focus groups, the interview format allowed me to collect more detailed, personalized information for my study. Although I recognize the localized, qualitative nature of my case study is not conducive to generalization to other contexts, I hope my findings and my application of theory can serve as a useful contribution for further transition research and in developing contextually relevant transition policy and programs.

### 3.2. Study Location

I chose Saskatchewan, one of the four provinces affected by the coal phaseout, for my case study location, because of an interest in exploring the effects of environmental policies in western Canada, as discussed in Section 1. Compared to Alberta, the other western province affected by the phaseout policy, Saskatchewan’s population and coal capacity is smaller, with coal production

concentrated in two communities, both located in the southern region of the province. This allowed for a more manageable scope of research, as I was able to include participants from both communities in my sample. In addition, the coal phaseout in Saskatchewan has been largely dictated by the federal mandate, whereas Alberta had previously committed to a coal phase out several years earlier, at the provincial level. In this way, the policy can be seen as a top-down initiative, rather than a process originated (or even welcomed) by the Saskatchewan population.

Saskatchewan has a population of approximately 1.1 million (Statistics Canada 2017), and is located in the prairie region of Canada, characterized by flat topography, cold winters and an economy based on agriculture and mining (Shvili 2020). With an electricity system primarily owned and operated by the province, 31% of Saskatchewan's current electricity supply mix comes from coal generation (SaskPower 2020). The province currently derives approximately 25% of its electricity from renewable sources, and has a goal to increase that capacity to 50% by 2030 (Government of Saskatchewan 2017). Participants for my study were recruited from the regions of Estevan and Coronach, two coal mining and coal power producing communities in southern Saskatchewan, which together comprise all of Saskatchewan's current coal power capacity.

Estevan is a small city, located in the southern region of the province near the American border, with a population of approximately 11,000 (Statistics Canada 2017). Nicknamed "The Energy City," Estevan's economy is characterized by power generation, coal mining, agriculture, manufacturing, and oil and gas drilling (City of Estevan). Estevan is home to the Estevan coal mine and two coal-fired power stations, *Boundary Dam* and *Shand*. In 2014 one of Boundary Dam's units was retrofitted with CCS technology, with the help of investment from the (previous Conservative-led) federal government. Two of Boundary Dam's units will reach the end of their life in the coming years, while Shand is expected to reach its end of life around 2042, and is being evaluated by the province for a potential CCS retrofit (CBC News 2018). See Table 1 for more details on these facilities.

Also located near the American border, the town of Coronach has a population of approximately 600 (Statistics Canada 2017). Many residents were initially incentivized to move to Coronach with the development of the *Poplar River* power plant, which, together with the coal mine, is a significant source of employment for several communities in the surrounding region (Canada 2019b).

Table 1: Coal mines and power generating facilities in Saskatchewan

Facility	# of Employees (approx.)	Coal-fired units	Capacity	shut down date (or est. end of life)*	CCS retrofit under consideration?
<b>Estevan Coal Industry</b>					
Estevan Mine	369		6M tonnes / year		N/A
Boundary Dam Power Station	400	3	120 MW	ca. 2064?	Retrofitted 2014
		4	129 MW	2021	no
		5	139 MW	2024	no
		6	284 MW	ca. 2028	?
Shand Power Station		1	276 MW	ca. 2042	yes
<b>Coronach Coal Industry</b>					
Poplar River Mine	167		3.3 M tonnes/year		N/A
Poplar River Power Station	170	1	582 MW	ca. 2031	?
		2		ca. 2033	?
(SaskPower; Westmoreland Mining LLC; Seal 2017; CBC News 2018, 2019; McElroy 2019)					
<i>*assuming an approximate lifespan of 50 years from date of commission / refurbishment. Boundary Dam units 4 and 5 have confirmed shut down dates in the coming years, with no plans for refurbishment / CCS retrofit.</i>					

### 3.3. Data Collection

Outreach was done through targeted email outreach, as well as more broadly through several community discussion and garage sale Facebook pages, where I issued a call for participants, which led to interviews with several interested respondents. A few participants were also individually referred from others. In order to hear a variety of perspectives, I interviewed participants from the coal industry, the general community and municipal government or administration. A total of seven participants took part in the study, consisting of three who had worked in the coal mining industry for the majority of their careers, three who were currently working in municipal governance, and one long-time community resident, who worked in agriculture.

The participants I interviewed from the coal sector had all worked in coal mining for the majority of their careers, where they had held a variety of positions. They had also lived within the study area for most of their lives. Two were towards the end of their careers and one was recently retired. I was not successful in recruiting anyone currently working in the coal sector who was under 55 and/or at an earlier stage in their career. I did not ask participants for their gender identity, however it is notable that coal mining is a traditionally male dominated sector, with 85% of

Saskatchewan workers in “mining, quarrying, and oil and gas extraction” identified as male (Statistics Canada 2017).

The participants I interviewed within municipal governance worked either in municipal administration, or as part-time elected officials. All were involved to some extent in the economic development planning processes in response to the coal phaseout. Two out of three of the municipal participants had lived in their community for the majority of their lives, and had close family ties to the coal industry, with one who had previously worked in a coal generation plant. In contrast to the group of coal workers, the interview participants within the municipal sector were on the younger side, all under the age of 55.

One other interview participant who did not fit into these two groups was a lifelong community resident, who owned a farm near a coal power plant. While many of their views aligned with other interviewees, they also had a number of particular concerns that did not find a place with the major themes in my findings (Section 4).

Interviews with participants were one-on-one, semi-structured, with broad, open-ended initial questions, based on a flexible interview guide, in order to promote a natural conversation style and reflect their individual experiences and perspectives. Participants were sent a consent form in advance informing them how their data would be used. Interviews took place in February 2021, were an average of one hour in length, and were conducted in English, over video or phone. Interview participants were anonymous, but quotes are labelled with a number based on the order I spoke to them, in addition to a code identifying the region and sector of each participant. Region codes include: E – Estevan, C – Coronach. Sector codes include: I – coal industry, M – municipality, O – other.

### 3.4. Data Analysis

I conducted data analysis in an iterative and partly theory-driven manner. All interviews were digitally recorded and transcribed, except for one which was mistakenly unrecorded, although detailed notes were taken directly afterward. I analyzed transcripts and notes in an exploratory manner, using the qualitative data analysis software NVivo. A preliminary coding scheme was developed from a set of initial research questions, which focused on views towards governance actors and approaches as well as conceptions of justice. More codes were added and refined based on themes that emerged from the data, such as uncertainty, denial, polarization and ideas about different energy sources. After conducting a review of theory, I compared several concepts within SRT against my codes, which gave rise to a focus on social representation transformation, according to the structural

tradition of SRT (Section 2). I then developed an outline with which to organize my findings, after which I revisited and revised my research aim and questions (Section 1.3) to better reflect this theoretical focus.

### 3.5. Methodological Reflections

If I was not subject to travel restrictions and financial constraints, I would have liked to conduct my research as a field study, or perhaps a focus group, in order to meet with my participants in person, observe interactions between people, and learn more about the local culture, providing a richer data sample from which to inform my analysis on social representations of the coal sector. My small and relatively arbitrary sample of interview participants is also a limitation. More diversity in my data sample would have likely provided a broader range in perspectives, and enabled a richer analysis. Had my interview sample included more community members, new themes may have emerged that would have impacted my findings.

Relying on participants' reflections in an interview format also has limitations, as I am relying on the views of individuals in a single conversation, to make assumptions of a much wider, group-elaborated construct of reality. As an inter-subjective concept, social representations present difficulties for study, both in the extent to which a social representation can itself be represented through research methods, and in the potential for data manipulation, as the research environment itself has the potential to influence participant responses (Wachelke 2012).

Finally, it is important to recognize my own positionality in the context of this study. While participants seemed quite open and interested in speaking with me, they were aware I was from eastern Canada, a point which carries some baggage (see Section 4). This may have affected the way that participants spoke with me, due to potential underlying feelings of mistrust or assumptions of a clash in values. I am also aware that it is not possible to compartmentalize my own values and assumptions from my research, and that they had an effect on my interpretations. In line with constructionism, I understand that meaning is created from interactions between subjects and objects (Moon & Blackman 2014), and thus the subjective values I brought into my data collection and analysis are part of the process of meaning construction, in the context of this study. As my research aim was one of understanding, I have approached this study with an intention of listening and learning, and I hope I have been able to do justice to the concerns of my participants with my own representations of their situations.



## 4. Findings

Applying the structural dynamics of social representations to my case study allowed me to explore the sense-making and coping processes experienced within Saskatchewan coal communities, in relation to the coal phaseout plan. In my interviews with participants, I found a range of perspectives on the phaseout policy, the related redistributive measures, and future opportunities for moving beyond coal. While these perspectives varied, within the majority of participants, understandings of the coal phaseout policy were embedded within the collective history and values of the coal sector. Many participants placed strong emphasis on the heritage, pride and culture of the local coal industry, which has brought prosperity and stability to the region for many years. This strong shared sense of collective memory and significance points towards a core element within the social representation of the local coal industry.

From this backdrop of relative consensus, participants varied in their responses to the process of transition brought about by the coal phaseout policy. Some expressed strong feelings of anger, disbelief or skepticism, while others took a more pragmatic approach, empathizing with the losses to the coal sector and the community, but accepting the imperative to transition to a new reality. I interpret these varied perspectives as different models of social representation transformation.

In this section, I outline my interpretation of how the peripheral elements tied to the changing dynamics caused by the phaseout policy are beginning to transform the core of the social representation of the local coal sector. The two models of transformation I identified are *resisting transformation* and *progressive transformation*.

### 4.1. Defining the Central Core

In my interviews, I found that all of my participants (with the exception of the one community outlier in my sample) spoke, unprompted, of the importance of the history of coal in shaping the local economy, culture and identity. Having brought prosperity to the local community over many decades, the coal industry had become

a “way of life” for many people, closely tied to values of pride and stability. Several participants referenced a long tradition of coal mining in the region, which began with burning coal for heat, as wood was not readily available in the prairie landscape. While many changes and innovations have occurred throughout the coal industry’s history, stories were used to illustrate how the tradition of coal mining has shaped the local economy and culture:

...coal goes back 150 years here...back to when they used to float the dig into the side of the river bank at Beinfait at Service River, and then in the high [water], in the spring, they would float it down to Winnipeg down the river. You know, it goes back a long way, so it’s ingrained pretty deep (5-EI).

The large proportion of the local workforce employed by the coal industry for many years, has impacted the make-up of the communities, and the culture of the region:

We have a proud tradition of 150 years of coal. And we are called “the energy city.” Surrounded by oil and gas, and obviously, coal-fired power generation, it’s definitely our way of life and how we live (3-EM).

Participants told me that coal has been a steady source of well-paying work for many, with an amicable work culture that has attracted many lifelong workers. As one participant described working in a coal mine: “this stuff gets in your blood...it’s your daily dose of what you need for the day, it’s like having a coffee” (6-EI).

Closely tied to history and culture were feelings of pride, as the coal sector had been providing an important service, with an affordable and stable supply of energy and a profitable resource, to the province for many years (7-CM – no transcript).

Stability was also another value tied to the coal sector, especially in contrast to the boom-and-bust cycles of the oil industry, or the weather and price volatilities in the agricultural sector, two other major industries in Saskatchewan:

...but us in Saskpower [energy utility]...we’re basically the steady rock that was always there, where the oil could come up and down. But we were the “always there” people. So...it didn’t matter what the price of oil is, we were always, the constant backbone, and...our wages were pretty darn good (S5-EI).

Stability was valued both at the industry level, as well as at the level of the individual worker, where many have taken long-term jobs in the coal sector: “Not many people move, once they get on at the mine or Saskpower...this is gonna be their career” (6-EI). This sense of stability was related to family and community values: “Here you’ve got a family life...you’ve got all your friends. Like you’re good for life. You know, in the oil sands, you’ve got someone new coming in today, and he’s gone tomorrow” (6-EI).

As evidenced above, the history of the coal industry was an important point of emphasis for many participants, and was associated with values of pride, stability, family and community. As a largely consensual understanding, intrinsically tied to the collective memory of the group, this sense of history and its related values seemed to comprise a core element in the social representation of the local coal industry. As I will detail more below, participants seemed to use this core element as a foundation on which to generate their understandings of the coal phaseout.

## 4.2. Dynamics of Transformation

As these communities are now grappling with a future without coal, it appeared that their understandings of that future, as well as the policy that had brought about this change, were intrinsically tied to the history, stability and prosperity that coal had brought to the region. With the core serving as a kind of foundation, some participants explained how this historical legacy had impacted understandings of the phase out policy:

We've got fourth generation, fifth generation coal miners, it very much is kind of the consistent part of our history in our community. And so, I think people can't imagine (the end of the industry), particularly because our coal-fired plants are so big (4-EM).

While I found that although participants began from a similar basis of respecting and honouring the history of the coal industry, they diverged in their perspectives towards the transition. Within these perspectives, I identified two general transformation models – the first (Section 4.2.1) was characterized by a strong defensive stance, anger towards the government, and skepticism of support measures (but rationalizing supports for workers); while the second (Section 4.2.2) incorporated an understanding of the emotional impacts, an awareness of transition as a process, and a sense of critical pragmatism, planning ahead and looking for new opportunities arising out of the transition.

While participants with the strongest ties to the coal industry tended to align with the resistance model, and participants working in local governance tended to lean towards the progressive model, there were some contradictions within participants, and evidence that elements of either model could be held simultaneously. Thus, rather than two distinct models of transformation, I look at my data as a sort of continuum, where tensions exist between resisting and progressive transformation. In Figure 1, both models are depicted as overlapping with the core, as well as with each other, showing the relationship between these three elements.













management process (7-CM). Participants understood that anger and resentment were natural responses to the threat of change, and part of the process that needed to be worked through:

That's been the big transition over the past couple of years is promoting change, and, we do need to think differently and all that sort of stuff. So that's obviously the biggest challenge you get, the people that don't want to change are the ones that are going to yell at you and stuff like that. So, you've just got to take it, do what you can, suck it up, and, you know, try to help them through it (3-EM).

Beyond the economic impacts of the transition, participants also acknowledged the importance of having a sense of purpose and meaning, which was a challenge, especially if people did not understand or believe the purpose behind the phaseout:

I think more than economics, people need to have something they can believe in. And now, they believe in their jobs. And they don't believe in the federal government, they don't believe in the pressing necessity for climate change. And so, until the conversation can include a future worth hoping for, worth working towards; something that's worth that economic uneasiness, it's really hard to think about what it's going to look like. Because I think what people need most is some reassurance, and that's not necessarily something that the government or even government funding can provide them (4-EM).

One participant also stressed the importance of recognizing the historical contributions that coal workers had made in the community and for the province, noting that a true just transition could not be achieved if the value and significance of that work was not recognized (7-CM).

By acknowledging the range of emotions associated with a process of transition, and considering the impacts of losing a sense of purpose, pride and tradition, I believe this alternative approach to transformation also served a function of honouring and respecting the values, history and pride of the coal sector, and thus was compatible with the core element.

#### *Awareness of transition process*

Within this model, there seemed to be an awareness of transition as a cognitive or emotional *process* that individuals (and the community as a whole) needed to go through. Participants felt that their communities were still relatively early in the process, with many individuals in the denial and anger stages, but they were hoping to come full circle towards acceptance and revitalization (7-CM).

Several participants expressed frustration that a number of people were in denial about the coal phaseout, as this made it difficult to engage workers and community members in collaborative planning, to ensure sufficient preparations are made in





## 5. Discussion

Through my findings, I have highlighted some of the challenges faced by people working and living in coal communities as they undergo a process of *symbolic coping*, in parallel with a process of material transition. While the material side of transition might include aspects such as availability of work, cost and availability of energy, changes in population, and standard of living; symbolic concerns might include maintaining a sense of meaning and purpose, adapting to changes in shared values and norms, and reimagining the historical legacy of coal. As Johnstone and Hielscher (2017) argue, “understanding how community cohesion and social networks in areas will be reconfigured and sustained as new energy futures emerge is crucial as part of fostering more just transitions” (p. 460). My study has contributed to building such an understanding, by exploring the structure, function and transformation of the social representation of the local coal industry in Saskatchewan. In this section, I will provide some more interpretative detail on my findings and theoretical model, followed by a discussion on how my findings can be used to help foster principles of just transition, and potential for further research.

### 5.1. Interpreting the Findings with SRT

I begin my interpretation by revisiting my first two research questions, which focused on how communities are making sense of and coping with Canada’s coal phaseout plan. Using the central core theory of SRT as a framework, I have explored how the processes of sense-making and coping seemed to be guided by a stable, relatively consensual core, wherein the historical legacy of the coal industry and associated values of pride, stability, and community relationships were emphasized. Participants coming from both the coal and municipal governance sectors recognized that the coal industry was more significant than simply a source of employment, as it had constituted and shaped the social fabric and cultural identity of their communities. In this way, the core seemed to equip participants with a sense of meaning and purpose, as well as a mechanism for symbolic coping, enabling participants to connect the changes being brought about by the coal phaseout, to their prior understandings and values.





As the central core theory delineates social representations by their core elements, the divergence of the core elements thus gives rise to a split in the social representation of the local coal industry as I had originally conceptualized it. In fact, the object being represented has also transformed through this process, as the cessation of the coal industry has required a reimagining of community life beyond coal.

Figure 2, which builds off of Figure 1, shows how the resisting and progressive transformation models, originally located in the periphery of the social representation of the local coal industry, transform the core in two different ways. These two separate cores are then depicted inside two new social representations (larger dotted circles), of community life after coal. However, as the essence and significance of the original core is still maintained, the new cores are depicted as overlapping with the original core. As transformation progresses however, they might move closer or further apart, and/or new transformation models might emerge.

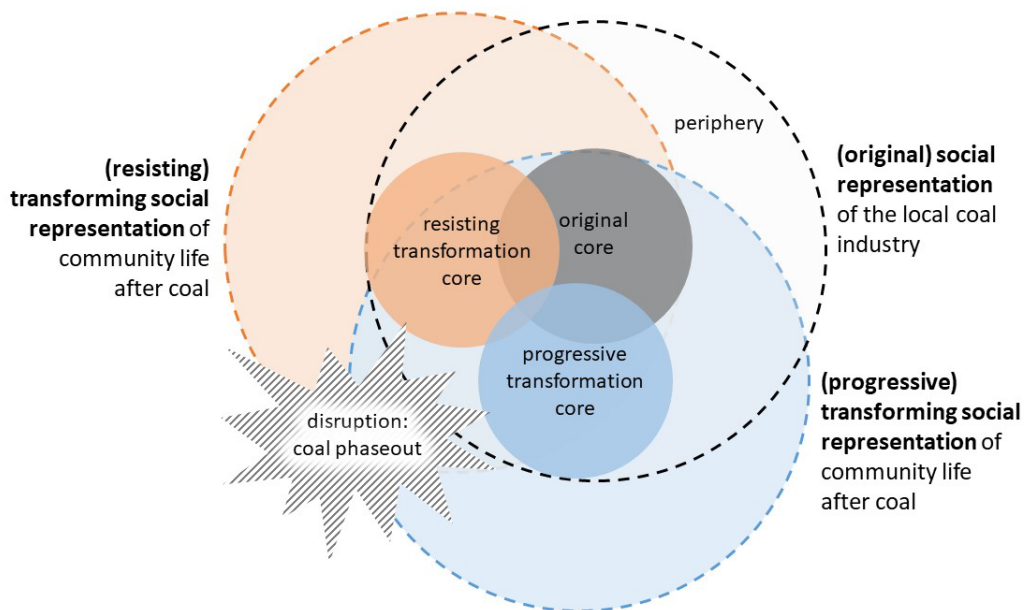


Figure 2: The transformation process: division of social representations

The transformation of a social representation, like the transition away from coal, can be seen as a *process*, and thus, it is conceivable that social representations in coal communities will continue to transform as the coal phaseout plan moves ahead. The snapshot in time in which my study took place was relatively early in the transition process, as no coal producing units had officially closed yet. As the transition away from coal progresses, one transformation model may become more dominant over time, or the new transformed cores may become more polarized. The













## References

- Abric, J.C. (1993). Central System, Peripheral System: their Functions and Roles in the Dynamic of Social Representations. *Papers on Social Representations*, 2, 75–78
- Abric, J.C. (1996). Specific Processes of Social Representations. *Papers on Social Representations*, 5, 77–80
- Bauer, M.W. & Gaskell, G. (1999). Towards a Paradigm for Research on Social Representations. *Journal for the Theory of Social Behaviour*, 29 (2), 163–186. <https://doi.org/10.1111/1468-5914.00096>
- Bertoldo, R. & Castro, P. (2019). From legal to normative: A combined social representations and sociocognitive approach to diagnosing cultural change triggered by new environmental laws. *Culture & Psychology*, 25 (3), 324–344. <https://doi.org/10.1177/1354067X18790730>
- Blewett, T. (2019). United We Roll protest convoy set to reach Parliament Hill on Tuesday. *Ottawa Citizen*. <https://ottawacitizen.com/news/local-news/united-we-roll-protest-convoy-set-to-reach-parliament-hill-on-tuesday/> [2021-04-23]
- Canada (2019a). *A just and fair transition for Canadian coal power workers and communities*. Ottawa: Environment and Climate Change Canada. [http://epe.lac-bac.gc.ca/100/201/301/weekly\\_acquisitions\\_list-ef/2019/19-11/publications.gc.ca/collections/collection\\_2019/eccc/En4-361-2019-eng.pdf](http://epe.lac-bac.gc.ca/100/201/301/weekly_acquisitions_list-ef/2019/19-11/publications.gc.ca/collections/collection_2019/eccc/En4-361-2019-eng.pdf) [2021-01-08]
- Canada (2019b). *What we heard from Canadian coal power workers and communities*. Ottawa: Environment and Climate Change Canada. [http://epe.lac-bac.gc.ca/100/201/301/weekly\\_acquisitions\\_list-ef/2019/19-11/publications.gc.ca/collections/collection\\_2019/eccc/En4-362-2019-eng.pdf](http://epe.lac-bac.gc.ca/100/201/301/weekly_acquisitions_list-ef/2019/19-11/publications.gc.ca/collections/collection_2019/eccc/En4-362-2019-eng.pdf) [2021-01-08]
- Canada Gazette Part II* (2018). No. 25 4505–4573. <https://gazette.gc.ca/rp-pr/p2/2018/2018-12-12/pdf/g2-15225.pdf> [2021-04-20]
- Castro, P. & Batel, S. (2008). Social Representation, Change and Resistance: On the Difficulties of Generalizing New Norms. *Culture & Psychology*, 14 (4), 475–497. <https://doi.org/10.1177/1354067X08096512>
- CBC News (2018-07-09). *SaskPower abandons carbon capture at Boundary Dam 4 and 5* | *CBC News*. <https://www.cbc.ca/news/canada/saskatoon/saskpower-abandons-carbon-capture-at-boundary-dam-4-and-5-1.4739107> [2021-04-08]
- CBC News (2019-01-11). *Saskatchewan reaches deal with Ottawa on coal-burning power plants* | *CBC News*. <https://www.cbc.ca/news/canada/saskatchewan/sask-ottawa-coal-agreement-1.4974402> [2021-04-08]
- City of Estevan *Statistical Overview*. <http://estevan.ca/statistical-overview/> [2021-04-08]
- Climate Analytics (2016). *Implications of the Paris Agreement for Coal Use in the Power Sector*. Berlin. [https://climateanalytics.org/media/climateanalytics-coalreport\\_nov2016\\_1.pdf](https://climateanalytics.org/media/climateanalytics-coalreport_nov2016_1.pdf) [2021-04-20]

- Creswell, J.W. & Creswell, J.D. (2018). *Research design: qualitative, quantitative, and mixed methods approaches*. Fifth edition. Los Angeles: SAGE.
- Dany, L., Urdapilleta, I. & Lo Monaco, G. (2015). Free associations and social representations: some reflections on rank-frequency and importance-frequency methods. *Quality & Quantity*, 49 (2), 489–507. <https://doi.org/10.1007/s11135-014-0005-z>
- Dawson, T. & Forrest, M. (2018). Why conservative politicians across Canada think they can beat Trudeau in fight over federal carbon tax. *National Post*. <https://nationalpost.com/news/politics/carbon-tax-battle> [2021-01-07]
- Effectiviology (n.d.). The Value-Action Gap: Why People Don't Act in Accordance with Their Beliefs. <https://effectiviology.com/value-action-gap/> [2021-05-19]
- Elcheroth, G., Doise, W. & Reicher, S. (2011). On the Knowledge of Politics and the Politics of Knowledge: How a Social Representations Approach Helps Us Rethink the Subject of Political Psychology: Social Representations Approach to Political Psychology. *Political Psychology*, 32 (5), 729–758. <https://doi.org/10.1111/j.1467-9221.2011.00834.x>
- Environment and Climate Change Canada (2019-03-11). Government of Canada welcomes report from Just Transition Task Force for Canadian Coal Power Workers and Communities. [News release]. <https://www.canada.ca/en/environment-climate-change/news/2019/03/government-of-canada-welcomes-report-from-just-transition-task-force-for-canadian-coal-power-workers-and-communities.html> [2021-04-23]
- Frank, B. & Girard Lindsay, S. (2020). *Addressing Polarization: What Works? Case Study: The Just Transition Task Force*. University of Ottawa: Positive Energy. <https://www.uottawa.ca/positive-energy/content/addressing-polarization-what-works-just-transition-task-force> [2020-10-30]
- Galgóczy, B. (2020). Just transition on the ground: Challenges and opportunities for social dialogue. *European Journal of Industrial Relations*, 26 (4), 367–382. <https://doi.org/10.1177/0959680120951704>
- Ganesh, S. & Zoller, H.M. (2012). Dialogue, Activism, and Democratic Social Change. *Communication Theory*, 22 (1), 66–91. <https://doi.org/10.1111/j.1468-2885.2011.01396.x>
- Garrigou, A.-S. (2016). Talking about the social, cultural and political aspects of the energy transition with Imre Szeman. *The Beam Magazine*. <https://medium.com/thebeammagazine/imre-szeman-ddb711a51d8a> [2021-04-10]
- Government of Saskatchewan (2017). *Prairie Resilience: A Made-in-Saskatchewan Climate Change Strategy*
- Guarnaccia, C., Giannone, F., Falgares, G., Ozino Caligaris, A. & Sales-Wuillemin, E. (2016). Differences in social representation of blood donation between donors and non-donors: an empirical study. *Blood Transfusion*,. <https://doi.org/10.2450/2015.0048-15>
- Guimelli, C. (1993). Concerning the structure of social representations. *Papers on Social Representations*, , *Special Topic: Structural aspects of social representations*, 2 (2), 85–92
- Healy, N. & Barry, J. (2017). Politicizing energy justice and energy system transitions: Fossil fuel divestment and a “just transition.” *Energy Policy*, 108, 451–459. <https://doi.org/10.1016/j.enpol.2017.06.014>
- Heffron, R.J. & McCauley, D. (2018). What is the ‘Just Transition’? *Geoforum*, 88, 74–77. <https://doi.org/10.1016/j.geoforum.2017.11.016>
- Howarth, C. (2011). Representations, Identity, and Resistance in Communication. In: Hook, D., Franks, B., & Bauer, M.W. (eds.) *The Social Psychology of*

- Communication*. London: Palgrave Macmillan UK, 153–168.  
[https://doi.org/10.1057/9780230297616\\_8](https://doi.org/10.1057/9780230297616_8)
- IEA, I.E.A. (2019). *Global Energy & CO2 Status Report*.  
<https://www.iea.org/reports/global-energy-co2-status-report-2019/emissions> [2021-04-26]
- Jaspal, R., Nerlich, B. & Cinnirella, M. (2014). Human Responses to Climate Change: Social Representation, Identity and Socio-psychological Action. *Environmental Communication*, 8 (1), 110–130.  
<https://doi.org/10.1080/17524032.2013.846270>
- Joffe, H. (2003). Risk: From perception to social representation. *British Journal of Social Psychology*, 42 (1), 55–73.  
<https://doi.org/10.1348/014466603763276126>
- Johnstone, P. & Hielscher, S. (2017). Phasing out coal, sustaining coal communities? Living with technological decline in sustainability pathways. *The Extractive Industries and Society*, 4 (3), 457–461.  
<https://doi.org/10.1016/j.exis.2017.06.002>
- Jørgensen, M. & Phillips, L. (2002). *Discourse analysis as theory and method*. London ; Thousand Oaks, Calif: Sage Publications.
- Marková, I. (2003). *Dialogicality and social representations: the dynamics of mind*. Cambridge ; New York: Cambridge University Press.
- McElroy, D. (2019-10-09). *Impending Power Plant Closure Means Trying Times Ahead for Coronach*. *Swift Current Online*.  
<https://swiftcurrentonline.com/local/impending-power-plant-closure-means-trying-times-ahead-for-coronach> [2021-04-09]
- Mertins-Kirkwood, H. & Deshpande, Z. (2019). *Who is included in a just transition? considering social equity in Canada's shift to zero-carbon economy*. <https://www.policyalternatives.ca/publications/reports/who-is-included-just-transition> [2021-01-08]
- Moliner, P. & Abric, J.-C. (2015). Central core theory. In: Andreouli, E., Gaskell, G., Sammut, G., & Valsiner, J. (eds.) *The Cambridge Handbook of Social Representations*. Cambridge: Cambridge University Press, 83–95.  
<https://doi.org/10.1017/CBO9781107323650.009>
- Moon, K. & Blackman, D. (2014). A Guide to Understanding Social Science Research for Natural Scientists: Social Science for Natural Scientists. *Conservation Biology*, 28 (5), 1167–1177.  
<https://doi.org/10.1111/cobi.12326>
- Moscovici, S. (1981). On Social Representations. *Social Cognition: Perspectives on Everyday Understanding*. University of New South Wales: Academic Press
- Moscovici, S. (1988). Notes towards a description of Social Representations. *European Journal of Social Psychology*, 18 (3), 211–250.  
<https://doi.org/10.1002/ejsp.2420180303>
- Moscovici, S. & Markova, I. (2000). Ideas and their development: a dialogue between Serge Moscovici and Ivana Marková. *Social Representations: Explorations in Social Psychology*. 224–286
- Mouffe, C. (1999). Deliberative Democracy or Agonistic Pluralism? *Social Research*, 66 (3), 745–758
- Natural Resources Canada (2018). Generation by Source, 2018. *Electricity Facts*.  
<https://www.nrcan.gc.ca/science-data/data-analysis/energy-data-analysis/energy-facts/electricity-facts/20068#L3> [2021-04-20]
- Oliveira, D.C. de (2013). Construction and transformation of social representations of AIDS and implications for health care. *Revista Latino-Americana de Enfermagem*, 21, 276–286. <https://doi.org/10.1590/S0104-11692013000700034>

- Petrocultures Research Group (2016). *After Oil*. Edmonton: University of Alberta. <http://afteroil.ca/resources-2/after-oil-book/> [2021-05-17]
- Pianelli, C. & Saad, F. (2016). Environmental Changes and Dynamics of a Network of Social Representations. *Papers on social representation*, volume 26, 7.1-7.40
- Pinker, A. (2020). *Just Transitions: a comparative perspective*. The James Hutton Institute & SEFARI Gateway. <https://www.gov.scot/publications/transitions-comparative-perspective/> [2021-04-10]
- PPCA (2017). Declaration - Powering Past Coal Alliance. <https://www.poweringpastcoal.org/about/declaration> [2021-04-20]
- Rateau, P., Moliner, P., Guimelli, C. & Abric, J.C. (2011). Social representation theory. *Handbook of Theories of Social Psychology*. Sage Publications, 477–497. [https://www.researchgate.net/publication/292251059\\_Social\\_representation\\_theory](https://www.researchgate.net/publication/292251059_Social_representation_theory) [2021-05-20]
- Ritchie, H. (2020). Electricity Mix. *Our World in Data*. <https://ourworldindata.org/electricity-mix> [2021-04-20]
- Sammut, G., Andreouli, E., Gaskell, G. & Valsiner, J. (2015). Social representations: a revolutionary paradigm? In: Andreouli, E., Gaskell, G., Sammut, G., & Valsiner, J. (eds.) *The Cambridge Handbook of Social Representations*. Cambridge: Cambridge University Press, 3–11. <https://doi.org/10.1017/CBO9781107323650.003>
- SaskPower (2020). *Annual Report 2019-20*. <https://www.saskpower.com/about-us/Our-Company/Current-Reports> [2021-04-09]
- SaskPower System Map (Boundary Dam, Shand, Poplar River Power Plants). *Our Power Future*. <https://www.saskpower.com/Our-Power-Future/Our-Electricity/Electrical-System/System-Map> [2021-04-08]
- Seal, J. (2017-11-23). *SaskPower's carbon capture future hangs in the balance* / *CBC News*. *CBC News*. <https://www.cbc.ca/news/canada/saskatchewan/saskpower-carbon-capture-future-1.4414985> [2021-04-09]
- Shvili, J. (2020-11-04). *The 5 Regions Of Canada*. *World Atlas*. <https://www.worldatlas.com/articles/the-regions-of-canada.html> [2021-04-08]
- Statistics Canada (2017-02-08). *Census Profile, 2016 Census*. <https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/index.cfm?Lang=E> [2021-04-08]
- Stevis, D. & Felli, R. (2015). Global labour unions and just transition to a green economy. *International Environmental Agreements: Politics, Law and Economics*, 15 (1), 29–43. <https://doi.org/10.1007/s10784-014-9266-1>
- Strangleman, T. (2001). Networks, Place and Identities in Post-industrial Mining Communities. *International Journal of Urban and Regional Research*, 25 (2), 253–267. <https://doi.org/10.1111/1468-2427.00310>
- Turconi, R., Boldrin, A. & Astrup, T. (2013). Life cycle assessment (LCA) of electricity generation technologies: Overview, comparability and limitations. *Renewable and Sustainable Energy Reviews*, 28, 555–565. <https://doi.org/10.1016/j.rser.2013.08.013>
- United Nations (2015). *Paris Agreement*. [https://unfccc.int/sites/default/files/english\\_paris\\_agreement.pdf](https://unfccc.int/sites/default/files/english_paris_agreement.pdf) [2021-01-12]
- Upham, P., Eberhardt, L. & Klapper, R.G. (2020). Rethinking the meaning of “landscape shocks” in energy transitions: German social representations of the Fukushima nuclear accident. *Energy Research & Social Science*, 69, 101710. <https://doi.org/10.1016/j.erss.2020.101710>



- Upham, P., Lis, A., Riesch, H. & Stankiewicz, P. (2015). Addressing social representations in socio-technical transitions with the case of shale gas. *Environmental Innovation and Societal Transitions*, 16, 120–141. <https://doi.org/10.1016/j.eist.2015.01.004>
- Wachelke, J. (2012). Social Representations: A Review of Theory and Research from the Structural Approach. *Universitas Psychologica*, 11, 724–741. <https://doi.org/10.11144/Javeriana.upsy11-3.srrt>
- Wagner, W., Duveen, G., Farr, R., Jovchelovitch, S., Lorenzi-Cioldi, F., Marková, I. & Rose, D. (1999). Theory and Method of Social Representations. *Asian Journal of Social Psychology*, 2 (1), 95–125. <https://doi.org/10.1111/1467-839X.00028>
- Westmoreland Mining LLC *Locations*. <https://westmoreland.com/about-us/locations/> [2021-04-09]
- WEXIT Movement (2020-09-09). The world needs Western Canada’s oil. *WEXIT Movement*. [https://www.wexitmovement.com/the\\_world\\_needs\\_western\\_canada\\_s\\_oil](https://www.wexitmovement.com/the_world_needs_western_canada_s_oil) [2021-04-23]
- Wolter, R. (2018). The Structural Approach to Social Representations: Bridges between Theory and Methods. *Psico-USF*, 23 (4), 621–631. <https://doi.org/10.1590/1413-82712018230403>
- Wyeth, G. (2020). How Climate Change Could Tear Canada Apart. *World Politics Review*. <https://www.worldpoliticsreview.com/articles/28534/in-canada-climate-change-could-tear-the-country-apart> [2021-01-21]

## Acknowledgements

A special thanks to my supervisor Anke for guiding and challenging me throughout the research process, I enjoyed working with you and learned a lot. Thank you also to all of my interview participants for generously sharing their time and ideas. I appreciated getting to experience a little slice of life in the Estevan and Coronach regions, and I hope I have done this justice in my research. Thank you also to my examiner and student opponent for your insights and discussion points on this work.

## Appendix – Interview Guide

For this research, I conducted semi-structured, conversational interviews, guided by the interviewees' personal experiences. My interviews were guided by a broad interview guide, which I have included below. However, as interviewees came from different backgrounds, with differing personalities and perspectives on the coal phaseout, the number of questions, and which particular questions I focused on differed between interviews. Sometimes additional follow-up questions were added that were not within the guide. This allowed for a natural flow of conversation, and allowed me to focus on the topics of most relevance to each participant.

### **Personal background / experiences**

Can you tell me a little bit about yourself?

Coal workers:

- Can you tell me about your job?
- How long have you worked there?
- What do you like about your job?

Community members:

- How long have you lived in (community name)?
- How would you describe your community?

### **Coal transition / governance**

Overall, what are your thoughts on the federal government's decision to phase out coal by 2030?

What do you understand about *why* this decision was made?

*How* do you think it is being handled? (consultation process, planning, etc.)

The federal government (and unions) has used the phrase "just and fair transition" for the coal phase out policy. What does that term mean to you?

- What would a just and fair transition look like in your view?

How do you think the phaseout will affect you personally?

Are you doing anything now to prepare for this transition?

How do you think it will affect your community?

Do you see any potential benefits to your community from phasing out coal?

Are there others that are particularly vulnerable, aside from coal workers?

Change: what is it that makes change difficult would you say?

What is your understanding of the supports that are being offered to aid in the transition?

What are your biggest concerns?

How do you think the current pandemic / economic situation will impact the coal transition initiatives?

- How does justice and fairness play into determining who gets support?

Overall, would you say you are hopeful or pessimistic that the community will recover from this transition?

## **Conclusion**

Thank you!

Would you like to add something I may have forgot to ask about?

Do you have any questions for me?

Can you suggest anyone else I should speak to?