Uncovering Hidden Narratives of Resource Dependent Communities: Coal Mining in Alberta

by

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Abstract

Coal mining in Alberta has proven to be a controversial and heated topic in the past few years. The decision of the Government of Alberta to rescind the 1976 Coal Policy in 2020 provided a new context for coal mining in the province. The future of coal mining in Alberta is complicated by national climate commitments and local environmental and social concerns related to open-pit coal mining. The perceived benefits of new coal mining projects in the province are largely connected to the potential for improved livelihoods for communities. However, previous scholarship on mining and resource dependency suggests a need for further research to understand the impact these new coal mining ventures will have on communities in Alberta. This thesis aims to reveal the past, present, and future impacts of coal mining in Alberta through two paper-based chapters using systematized literature reviews.

The first chapter uses a community capitals framework to assess capacity and adaptation in Alberta's coal mining communities from 1874 to 2022, focusing on the beginning of industry from 1874 to 1919. The communities of Hillcrest, Nordegg, and Rosedale serve as case studies to illustrate historical narratives of coal mining towns. This chapter aims to reveal the challenges and opportunities mining communities face using financial, natural, human, social, and political capitals. Through categorizing coal mining narratives into the community capitals framework, overall patterns and trends were identified over a roughly 150-year period. Today, the incentives for coal mining in Alberta largely center around economic benefits for communities; however, the history of coal mining communities in the province reveals that the perceived economic benefits of the industry should not outweigh the social, environmental, and political costs.

The second paper chapter focuses on who is missing from the historical records of coal mining in Alberta, namely non-Indigenous and Indigenous women from 1874 to 1919. The active exclusion of non-Indigenous women, Indigenous communities, and Indigenous women raises questions and concerns about colonial violence, intersectionality, and economic exclusions. In mining dependent communities, women are often characterized by binary labels such as "wives" and "whores". Using critical race theory, feminist theory, Indigenous feminist theory, and settler colonial theory, this second chapter explores how this binary has been used in Alberta's coal mining communities and the contemporary implications this dichotomy poses for non-Indigenous and Indigenous women. The history of resource dependent communities can shape the outcomes of what is possible in the future. This thesis contributes to the literature on

sustainable livelihoods and resource dependency as it reveals the patterns and trends of coal mining communities in Alberta. In order to understand what a possible future of coal mining will look like in the province, this thesis uncovers the hidden historical narratives of Alberta's coal mining communities.

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CHAPTER 1.0: Introduction

Introduction

As the global community seeks opportunities for more sustainable development, coal mining has faced increased scrutiny. Coal is the largest single source of global temperature increase and is responsible for twenty percent of global greenhouse gas emissions (El-Sheikh, 2022). Canada has committed to phase-out traditional coal-fired electricity and end exports of thermal coal by 2030 (Government of Canada, 2017b, 2021). However, these goals were complicated in 2020 when the Government of Alberta rescinded the province's 1976 Coal Policy with no public consultation allowing for new coal mining project proposals (Dryden, 2022; Fletcher & Omstead, 2020; Reuters, 2020).

Alberta has one of the largest sources of coal in Canada and a long history of coal mining that dates back to 1874 (Winter et al., 2021) and has undergone many changes over the last 150 years. Although coal mining is being phased out in other regions of Canada, the Government of Alberta is seeking to increase open-pit coal mining exploration and development in the foothills of the Rocky Mountains. Although opposed by people in Alberta and elsewhere, the 2022 Premier of Alberta suggests that opposition was being driven by an urban population that did not understand the significance that "[t]here [are] thousands of Alberta families who put food on the table because of the mining industry" (The Canadian Press, 2021).

This framing that coal mining provides key benefits to rural Alberta communities has been central to the rationale of the Government of Alberta to re-invigorate the coal industry. However, theories on mining and resource-dependency would suggest the need for critical reflection on the questions of equity and sustainability. To what extent did Alberta communities benefit, and how, from coal mining in the past? Drawing on archival materials from 1874 through 1919 about three communities Hillcrest, Nordegg, and Rosedale, and the experiences of non-Indigenous and Indigenous women, this thesis aims to unpack the hidden narratives of resource dependency in Alberta. The two objectives of this thesis are:

1. To reveal how mining communities coped with the opportunities and challenges of coal mining over time (1874 to 2022), based on an analysis of the financial, natural, human, social, and political capitals.

2. To contribute to an improved understanding of the history of coal mining communities through an analysis of the roles of non-Indigenous and Indigenous women in coal mining communities.

This thesis is structured in four chapters and is constructed in a paper-based format, meaning that Chapters Two and Three are written in stand-alone paper format with the intent of future publication. The purpose of this first introductory chapter is to introduce the theoretical frameworks used in this thesis along with the concepts that are used in both paper chapters, as well as describe the methodology of how this thesis research was developed and executed. The literature review provides context for mining projects on an international and national level and the ways that Indigenous communities interact with mining projects in Canada and around the world. Both paper chapters share the results of systematized literature reviews.

Chapter Two, titled "Identifying capacity and adaptation in Alberta's coal mining communities using a community capitals framework," aims to contribute to the literature on resource dependent communities using the lens of the community capitals framework. Analysis of secondary literature about the company towns of Hillcrest, Nordegg, and Rosedale during the period 1874 to 2022 addresses the questions; to what extent did rural mining communities benefit from coal mining in the past and is there potential for them to benefit in the future? The community capitals framework (human, financial, social, political, and natural) was employed to examine the kinds of resources available to communities in their efforts to build sustainable livelihoods. The chapter concludes that most benefits of coal mining were historically captured by an economic elite who did little to invest in the human capital (e.g., education and health) of workers and communities or diversity economic opportunities. Social capital of families was critical to the people of Hillcrest, Nordegg, and Rosedale in providing health, education, and other supports during historic periods, however, the absence of political power (capital) significantly limited the capacity of Hillcrest, Nordegg, and Rosedale to develop livelihood alternatives. The communities closed in the mid-20th century. As the Government of Alberta entertains new opportunities for coal extraction, these histories of Hillcrest, Nordegg, and Rosedale provide a critical view of coal mining, which are consistent with theories of resource dependency.

Chapter Three is the second of two paper chapters, titled "Gender and Indigenous Erasure in Alberta's Early Coal History." This chapter reveals how non-Indigenous and Indigenous women have been excluded from the dominant historical narratives about coal mining in Alberta (1874- 1919). Drawing inspiration from critical race theory, feminist research, Indigenous feminist research, and settler colonial theory, the results highlight how women during this time period were categorized as either wives or whores; other aspects of their roles in coal mining economies must be explored in order to develop a more holistic understanding of the problems of resource-dependency.

Chapter Four, the concluding chapter, provides an overview of the major themes and arguments made in this thesis and how the two paper chapters are connected. Suggestions for future research are provided.

Setting

Mining in Canada

Canada has an extensive history of mining, with some of the first recorded mines being coal mines in Atlantic Canada and Indigenous communities extracting natural resources before the arrival of European settlers (Cape Breton Island et al., 2010; Pascucci et al., 2000; Pierce & Hornal, 1994). Mining has played a crucial role in Canada's economy and history, with the country's vast natural resources making the country a global leader in the mining industry (Government of Canada, 2017a, 2022). As a top global producer of minerals such as gold, nickel, copper, zinc, and diamonds, as well as resources such as oil and coal, major mining regions in Canada span across the entire country (Government of Canada, 2017a, 2022).

Coal combustion is a major contributor to global warming (Edwards, 2019; Jakob et al., 2020). Despite decades of knowledge connecting coal to climate change, coal combustion still accounts for 40 percent of global CO_2 from energy use (Jakob et al., 2020). In order to meet the Paris Agreement climate goals, the power sector must stop using coal by 2050 (Jakob et al., 2020). Since Canada, and more specifically Alberta, is a major contributor of thermal coal to the global markets, this has implications for current mining projects in the country and province (Government of Canada, 2017a, 2021). In accordance with the Paris Agreement, Canada plans to stop all production and exports of thermal coal by 2030 (Government of Canada, 2021). Other major coal producing countries, such as China and Australia, have not started reducing coal

production and use (Bradsher & Krauss, 2022; Taylor, 2022). The future of coal mining on a global scale has an uncertain future with increasing international pressure to decrease coal production. However, with major producers still carrying on as usual, it is hard to know if the goals of the Paris Agreement will be met.

Indigenous Communities and Mining in Canada

Many Indigenous communities are located in areas that are rich in natural resources, such as significant mineral deposits (Parlee, 2015; Sandlos & Keeling, 2015; Southcott et al., 2018; Warden-Fernandez, 2001; Yakovleva et al., 2022). Mining projects in Canada have had a significant impact on Indigenous communities. Historically in Canada, Indigenous communities have not been properly consulted when it comes to mining projects dating back to treaty negotiations and the beginning of settler communities in the country. For example, in Treaty 7, a region rich in coal, First Nations groups say that the sub-surface rights were never ceded (Hildebrandt et al., 1996). When the Nations of Treaty 7 were asked to share their land with white settlers for agriculture purposes, the Treaty 7 chiefs agreed that the newcomers could use "topsoil," a two-foot depth (Hildebrandt et al., 1996). The land below, including all minerals, was not included in this agreement (Hildebrandt et al., 1996). As Rosie Red Crow states, "Only Canada benefited from mining and minerals" (Hildebrandt et al., 1996, p. 163). Resource extraction has resulted in the displacement of Indigenous peoples from their traditional territories (Green, 2018; Hildebrandt et al., 1996). Additionally, mining projects have left lasting environmental and social impacts on Indigenous communities through climate change, abandoned mines, community health concerns, landscape change, and pollution (Collins & Kumral, 2021; Paci & Villebrun, 2005; Sandlos & Keeling, 2015; Warden-Fernandez, 2005).

Theoretical Framework

Mining, including coal mining, presents numerous opportunities and challenges for communities seeking to develop sustainable livelihoods. We understand these opportunities and challenges through the critical lens of two theoretical frameworks - sustainable livelihoods and resource dependency.

Sustainable Livelihoods

Sustainable livelihoods refers to "the ability, assets and income-generating activities of individuals or families to improve their long-term living conditions," according to the World

Commission on Environment and Development in the 1980s (Chatterjee, 1987; Wang et al., 2020). Since the 1980s, the definition of sustainable livelihoods has remained the same. In the 1990s, the Department for International Development (DFID) in the United Kingdom claimed that "A livelihood is sustainable only when a livelihood can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base" (DFID, 1999; Wang et al., 2020). The concept of sustainable livelihoods has been tested empirically and theoretically and is now utilized globally by individuals, governments, and non-governmental organizations (Zhang et al., 2019). Typically, the concept of sustainable livelihoods is thought of as a tool to address and mitigate poverty (Zhang et al., 2019).

From the concept of sustainable livelihoods comes the sustainable livelihoods framework, also known as the sustainable livelihoods approach, which has become a core principle for addressing inequality internationally (Zhang et al., 2019). The sustainable livelihoods framework organizes factors that constrain or enhance livelihood opportunities and shows connections through a capitals framework (Serrat, 2017). These capitals then help to inform the vulnerabilities of individuals, households, and communities in the face of changes (Serrat, 2017). While not directly mentioned in the paper-based chapters in this thesis, the theory of sustainable livelihoods informs this research. This thesis contributes to the literature on sustainable livelihoods in two distinct ways. The first is through the analysis of mining dependency through the community capitals framework. The second way this thesis contributes is by narrowing in on the experiences of non-Indigenous and Indigenous women in mining dependent communities. Both paper chapters in this thesis focus on the factors that constrain and enhance livelihood opportunities for individuals, households, and communities over time in Alberta's coal mining communities.

Building off of the DFID description of sustainable livelihoods, it is critical to ensure that livelihoods do not come at the cost of undermining a natural resource base. When considering mining, it is important to understand the sustainability of the industry in order to evaluate the sustainability of the livelihoods it provides. In the early 2000s, the idea of sustainable mining began to circulate due to industry sponsorship (Whitmore, 2006). Even though the mining industry has adverse environmental impacts, some mining projects are considered to be

sustainable because they generate economic benefits for local communities (Laurence, 2011). One example of this is debates on the sustainability of surface coal mining in Appalachia, a coal-rich region in the United States (Laurence, 2011). Some view surface coal mining in Appalachia as being sustainable as it "creates jobs, living space and recreation for this and future generations" (Laurence, 2011). Many theorists consider sustainable mining to be an oxymoron (Kirsch, 2010; Whitmore, 2006). We can understand more about the sustainability or unsustainability of mining communities through the lens of resource dependency.

Resource Dependent Communities

Resource dependency is an area of sociological theory referring to the socio-economic and political dynamics of resource extraction and its impacts on communities. It is specifically defined as the overspecialization of a local economy in the sector of natural resources (Freudenburg, 1992; Mueller, 2022; Perdue & Pavela, 2012). Although the relationship between communities and resource extraction industries (e.g., mining, forestry, petroleum) varies, the volatility of resource markets and lack of political power of communities involved in these industries has led to the common experience of boom-bust employment and economic marginalization.

Theories on resource dependency in the context of coal mining have been well developed in the United States, particularly in Appalachia (Freudenburg & Gramling, 1994; Freudenburg & Wilson, 2002; Frickel & Freudenburg, 1996; Gaventa, 1982). In this region, poverty is persistent even though mining jobs have much higher wages than other work (Elo & Beale, 1985; Freudenburg & Gramling, 1994). Additionally, mining development in Appalachia is actually thought to lead to underdevelopment with the advantages of mining activities flowing out of the region that supplies the resource (Freudenburg & Gramling, 1994). These findings in Appalachia are consistent with evidence from other mining dependent communities globally (Bush, 2008; Freudenburg & Gramling, 1994; Frickel & Freudenburg, 1996).

Building upon the idea of underdevelopment connected to resource dependency, the idea of a resource curse has been theorized at a regional level (Parlee, 2015). Commonly, the resource curse is theorized at a national level where countries rich in natural resources tend to experience slower economic growth than those with a lesser endowment of natural capital (Sachs & Warner, 2001). The resource curse is traditionally an economic theory, and previous scholarship has

utilized macro-scale indicators such as national GDP to determine if a country is experiencing a resource curse (Ploeg, 2011; Sachs & Warner, 2001). However, in developed countries with an abundance of natural resources (i.e. Canada), macro-economic indicators are unlikely to represent a resource curse even though resource rich regions within the country might experience slower economic growth due to the presence of natural resources.

The resource curse also has social symptoms that are consistent with the underdevelopment in resource dependent communities (Parlee, 2015). Social costs such as resource rents flowing out of the communities, weakening of governing structures, and low educational attainment (Auty, 2001; Parlee, 2015). Further, those living in frontier or resource rich regions face increased adverse socio-economic and ecological effects of resource extraction (Auty, 2001; Parlee, 2015). This thesis reviews Alberta as a resource rich region in Canada in order to expand upon previous resource curse literature (i.e. Parlee (2015)). The historical perspectives of Chapters 2.0 and 3.0 explore frontier conditions of Alberta's coal mining industry and expand upon the social impacts of resource extraction and mining dependency.

Much understanding of mining economies has been large in scale with limited consideration of the experiences of local people. Previous work addressing the history of coal mining communities in Alberta focuses on frontier conditions and not on the industry itself. Freudenburg and Frickel (1994) explain, "[t]he historical era of extraction does far more than to provide a setting; it also shapes the outcomes that are likely or even possible." Resource dependency, including boom-bust cycles, has, however, not been well researched over long time periods (Freudenburg & Frickel, 1994). This thesis attempts to address this gap by examining resource dependency over a 150-year time period with critical consideration of the experiences of three communities that have all but disappeared from Alberta - Hillcrest, Nordegg, and Rosedale. Equally hidden have been the stories of women within these communities who have too often been stereotyped as wives or whores.

Methodology

Previous work on coal mining histories in Alberta has been conducted using various historical methodologies. Existing scholarship focusing on economic and labour histories connected to company towns utilizes both primary and secondary data (Bercuson, 1974, 1977; den Otter, 1975, 1975; Finkel, 2012; Piper & Green, 2017; Seager, 1985). These works draw

from several archival sources, such as mining records from regions and individual mines, government reports, census data, and newspaper articles. On the other hand, previous literature concerning the role of women and Indigenous communities in Alberta's early frontier history relies heavily on oral histories, diary entries, newspaper articles, and interviews (Carter, 1993, 2008; Dempsey, 1994; Gray, 1971; Hanks & Hanks, 1950). The existing literature inspired this research as it demonstrated a need to draw from both primary and secondary sources in order to understand social and economic histories in this setting. This thesis relies primarily on secondary sources; however, primary sources such as diary entries, mining records, and government reports informed this research.

Author Statement

In sociological research, it is imperative to consider the possible influences on the project from the researcher. Inevitably my own position as a researcher has influenced this thesis. While conducting this research, I employed some safeguards to mitigate my personal biases influencing this work. The first was, to the best of my ability, to triangulate all historical narratives. In other words, I attempted to find accounts from ideally three or more perspectives on the same subject. Another method I employed was to remind myself constantly of my own position and background in order to be reflexive in my approach and remain as neutral as possible.

I am a non-Indigenous settler raised on the traditional territory of the Anishinabewaki, Odawa, and Mississauga Peoples. I am thankful for the time I spent living, learning, and playing on Treaty 29 and Treaty 45 ½ lands. I now live, work, and play on the traditional, ancestral and unceded territory of the kʷikʷəƛ̓əm (Kwikwetlem First Nation). Many thanks to the kʷikʷəƛ̓əm who continue to live on these lands and care for them, along with the waters and all that is above and below.

I hold previous degrees in Global Affairs and Environmental Science that piqued my interest in resource dependent communities and sustainable futures. One area that I am passionate about is the intersection of gender and resource dependency. This interest was what led to the second paper chapter in this thesis, which identifies the gaps present in previous coal mining narratives. The exclusion of non-Indigenous women, Indigenous communities, and Indigenous women from the dominant coal mining histories in Alberta was very clear to me.

When I was 17, I moved from a small, rural community in Ontario to so-called Coquitlam, British Columbia. This move was eye-opening for me because it was the first time I faced the reality of the colonial violence Indigenous communities and Indigenous women experience. After moving, I saw consistent and frequent reports of violence against Indigenous women and girls. I have frequently questioned if I should be the one conducting this research as a white woman. This research did not begin with the expectation of unveiling deep rooted patterns of violence against Indigenous women and girls connected to resource dependent communities, but that was an obvious gap in the literature. In my own personal journey of decolonization and reconciliation, I understand that this work should not be the only research conducted on these historical narratives.

Post-Positivist Perspectives

A post-positivist approach to research, as used in this thesis, is that all research should be in search of a better understanding of what is true (Creswell, 2014). Approach research from a post-positivist perspective requires the researcher to acknowledge that all research is imperfect and fallible (Creswell, 2014). As such, any research conducted builds upon previous work to determine a better understanding of what is true. Alternative historical approaches are necessary to understand the mining histories in Alberta and to better recognize the impacts of this industry, which played a key role in the economic development of the province and country. These impacts can only be understood by recognizing the complex and dynamic interactions between communities and the natural resources that underpin their economies (e.g., social-ecological systems approach), by considering the unique experiences of specific communities (i.e., through a case study approach), and by recognizing there are diverse experiences of different community members including women and Indigenous Peoples (i.e., intersectionality).

Social-Ecological Systems Approach.

A social-ecological systems approach provides a framework to understand the interlinked dynamics of environmental and societal change (Fischer et al., 2015; Ostrom, 2009; Teitelbaum et al., 2019; Van Assche et al., 2022). This approach focusses on the social processes of individuals, groups, and communities and the relationships to the environment in a regional setting as well as recognizing the importance of natural resources itself in social and environmental systems (Teitelbaum et al., 2019). Previous work on coal mining in Alberta treats

coal as a natural resource as the backdrop or setting for social analysis. The social-ecological systems approach challenges the concept that coal is a setting for local histories and instead identifies coal as a driving factor for social narratives. Scholarship that this thesis draws from did not use a social-ecological systems approach and instead treated mining dependent communities similarly to other rural developing communities. However, an analysis of the social and economic narratives of company towns in Alberta must also consider the complex connections linkages natural resources have on those narratives and vice versa.

A social-ecological systems approach is used in both paper-based chapters in this thesis to unpack the social, economic, and environmental narratives directly connected to coal as a natural resource. During data collection for Chapter 2.0 and Chapter 3.0, a particular focus on narratives attached to coal mining communities was employed. This approach allows this research to go beyond a general history of frontier communities or rural development in Alberta and instead provides a space to analyze the social and environmental connections in resource dependent communities.

Case Study Research.

Case study research is qualitative and often produces in-depth descriptions over a short period of time (Creswell, 2014; Hays, 2003; Yin, 2009). Case studies provide examples for the reader to draw upon (Hays, 2003). This style of research can leave the determination of meaning and worth to the reader, who can form their own conclusions by drawing on information from the case study (Hays, 2003). Scholarship that utilizes case study research can either present an individual case study or can use more than one case study in order to make a broader generalization (Yin, 2009). In this thesis, case studies are used in Chapter 2.0 to provide specific examples of social, economic, and environmental narratives from three different communities (Hillcrest, Nordegg, and Rosedale). In previous work on company towns and mining dependent communities in Alberta and Western Canada, there is a tendency to generalize across larger regions. The use of case studies allows the reader to understand common characteristics between mining dependent communities while still maintaining that each situation is unique.

When conducting research with multiple case studies, it is important to identify that the case studies are balanced in the amount of qualitative data available. This was considered when choosing the towns of Hillcrest, Nordegg, and Rosedale to be case studies in Chapter 2.0.

Careful attention was given to ensuring that there was a similar amount of information present for each case study town. Additionally, each case study represents different conditions of coal mining towns in Alberta, meaning each case study provides context and information that is different from the others. These case studies draw from mainly secondary sources to provide an in-depth qualitative exploration of the experiences of mining dependent communities in three unique cases.

Intersectionality.

Intersectionality seeks to expose differences between broader categories of identity (i.e., race, gender, sexuality, class, etc.) and serve as a force for mediating tensions between multiple identities (Crenshaw, 1989; Nash, 2008). The term intersectionality was coined by legal scholar Kimberle Crenshaw to describe the unique position Black women occupy in society as a result of the intersection of racism and sexism (Crenshaw, 1989; Nash, 2008). Since Crenshaw's first use of the term in 1989, intersectionality has become an important consideration in all sociological research. In recent years intersectionality has been increasingly researched in relation to mining dependent communities with an emphasis on the experiences of women, particularly Indigenous women (Horowitz, 2017; Lesnikov et al., 2023; Manning, 2016; Osborne et al., 2019).

An intersectional approach informs this thesis and is employed when considering how social, economic, and environmental narratives might be influenced by different categories of identity. Narratives and life-stories are thought to be important resources for identifying intersectionality as they are shared in relation to identities (Buitelaar, 2006; Christensen & Jensen, 2012; Prins, 2006). Existing scholarship exploring intersectionality in mining communities will often employ qualitative methods, such as semi-structured interviews and focus groups, to gather narratives as data (Horowitz, 2017; Nightingale et al., 2017; Parmenter & Drummond, 2022). These studies focus on contemporary narratives of intersectionality in mining communities. Instead of analyzing contemporary narratives, this thesis relies heavily on historic narratives, and so a mixture of primary and secondary sources contributed to the data collected. With this in mind, it is important to note that much of the literature on Alberta's coal mining history has been constructed by men with limited perspectives on how mining impacted non-Indigenous and Indigenous women. Attention to this bias in the existing literature was a large consideration during data collection for both paper-based chapters, with particular attention given to this in Chapter 3.0.

Methods

This research was conducted using a systematized review process (Grant & Booth, 2009). Two separate literature reviews were done to form this thesis. The first literature review focused on the early history of coal mining in Alberta broadly, and the second focused specifically on missing perspectives from the broader review. Both of these reviews followed the same methods and are considered systematized reviews. Systematized reviews are very similar to systematic reviews however, there are a few key differences. Systematic reviews are the best known type of literature review as it seeks to draw together all known knowledge on a topic area (Grant & Booth, 2009). Systematic reviews incorporate quantitative, qualitative, and mixed method studies. This review, while following the systematic review model, qualifies as a systematized review as it does not meet all of the requirements of a systematic review. For example, a systematic review requires two or more reviewers (Grant & Booth, 2009). For the purposes of this study, there was a single reviewer, and thus the results of this literature review are limited compared to a full systematic review.

The first literature review was carried out in two phases. The first phase took place from July to October 2021, and the second phase took place from December to March 2023. The aim of this first phase was to compile literature outlining the social narratives of Alberta's early coal mining company towns, specifically focusing on 1874 to 1919. This review used an exploratory approach to create space to seek out relevant published literature allowing the search to reflect the complexities surrounding company towns in Alberta's early mining frontier. The review began by using key terms to search two databases and then expanded through citation searches, reference checking, and including gray literature. The second phase of the first literature review expanded upon the first search to include social and economic narratives of coal mining communities from 1920 to 2022.

The second literature review was carried out in three phases between February and June 2022. I conducted an initial literature review to determine some key issues, themes, and roles of communities. The first phase of the literature review was an exploration of literature surrounding coal mining communities in Alberta from 1874 to 1919 to unpack if there were any perspectives missing from the historical narratives. Then the second phase of the literature review was carefully examining the literature to demine in what contexts non-Indigenous women and

Indigenous communities were mentioned. From there, I noticed that Indigenous women, who occupy an intersectional space, were uniquely positioned in coal mining literature in Alberta. The final phase of the literature review focused on Indigenous women and the role they played in coal mining communities in Alberta from 1874 to 1919. Recognizing the problem of Indigenous erasure from settler histories, I expanded my search to find additional literature that might help illuminate more about the histories and experiences of Indigenous women in this context.

Inclusions and Exclusions

The sources that were used included journal articles, primary sources, gray literature, and dissertations. Primary sources that were included constitute memoirs, photographs, diary entries, and archival material from Library and Archives Canada. I implemented the following system to verify the credibility and value of each primary source I use in this paper. Due to limitations of time and resources, articles that were published in other languages besides English were excluded. For each source, I engaged in a critique of the source to determine its validity. This critique allowed me to identify the ways in which each source was incomplete and biased (Kipping et al., 2013). In addition to this critique, I examined each source by engaging in the process of triangulation of resources. In historical research, the triangulation of resources is a critical method of verifying sources (Kipping et al., 2013). This meant that I used multiple sources in my research combining insights from each to strengthen my findings and interpretations of the sources (Kipping et al., 2013). Using multiple sources allows the researcher to identify contradictions in various sources and to notice when facts and observations align between multiple sources (Kipping et al., 2013).

Search Strategy and Data Extraction

The search strategy was to identify relevant evidence and information using web-based searches of Google Scholar and JSTOR to search the scholarly literature. From these searches, I then explored related works, citations, authors, and publications then retrieved these documents through the University of Alberta library system, the Vancouver Public Library, Libraries and Archives Canada, and various bookstores. Identified articles deemed to be relevant to the aim of the review were retrieved in full for analysis. Data were extracted into themed categories in Microsoft Excel, and key data was extracted, including the author, year, the focus of the source, potential biases of the source, key findings, and implications.

Analysis

For both systematized reviews and their different phases of research, the approach to the analysis was to explore and identify themes and categories in the data reflecting the aims of both reviews. For Chapter 2.0, each source was read and analyzed based on the community capitals framework (financial, natural, human, social, and political), where the categories served as themes. The approach for Chapter 3.0 was slightly different, each source was read and analyzed to consider any areas where women, Indigenous communities, and Indigenous women were included in the narratives surrounding coal mining in Western Canada, specifically Alberta. When I read these sources, I noticed overarching themes between sources and determined there were four groups of interest (wives, whores, Indigenous communities, and Indigenous women). For both Chapters 2.0 and 3.0, once the themes were identified, the sources were coded based on the themes.

Limitations of this Research

There are numerous gaps and limitations that should be taken into consideration when reviewing this thesis.

COVID-19 Challenges

Over the past few years, COVID-19 has significantly impacted research opportunities. Due to the pandemic traditional methods of qualitative method collection, such as in-person interviews and focus groups, have become more challenging to conduct. The plan at the beginning of this project was to conduct interviews and focus groups with communities in the Blackfoot Confederacy. Due to the uncertain and volatile nature of the pandemic, this research was put to the side. Adapting interviews and focus groups to comply with social distancing and other safety protocols has its own set of challenges. Virtual options such as video conferencing or phone calls have limitations. Virtual interviews limit nonverbal communication between the researcher and the participant. Further, virtual spaces may not be accessible to all participants due to issues with technology, internet connectivity, and lack of previous experience with virtual platforms.

Limited Archival Materials

Also limited by COVID-19 was the author's ability to access archival material. Travel limitations during the bulk of this research due to the pandemic restricted the author's access to

archival material in different archives in Alberta. Many of the archival materials this thesis draws on are accessible online or more broadly accessible across Canada. Specific regional archival material was not accessible for this research. Additionally, due to the nature of historical research, some primary research was inaccessible regardless of the pandemic. As a result, this work heavily relied on secondary sources.

Indigenous Perspectives

Remembering the post-positivist approach used in this research, it is valuable to recognize that this work is imperfect and fallible. Regardless of the precautions taken to reduce bias in this research, my own positionality as the author must be considered. Although I am on a lifelong journey of decolonization and reconciliation, as a non-Indigenous settler on Indigenous land, my position as a white woman and the privilege that I have influences my research. I am sure that I will reflect on this research in the future and notice my own positionality in a way that I am unable to as I am writing this thesis.

This thesis was created in attempts to provide a comprehensive, longer-term review of mining dependent communities in Alberta. As a result of the scope and the limitations of this being a master's thesis this research is very broad. For example, Chapter 3.0 focuses broadly on non-Indigenous women as well as Indigenous communities and Indigenous women. The erasure of Indigenous women from the landscapes and social/economic histories of coal mining can and should be researched in more depth. As it stands currently, my research does not solely focus on Indigenous women but also on the experiences of non-Indigenous women in coal mining communities. The binary roles of women in frontier settler mining communities is important context for the erasure of Indigenous women from historical narratives. However, the experiences of Indigenous women connected to resource extraction in Canada is an important area of research and a future study specifically focusing on this connection in Alberta's coal industry would provide invaluable insight for a sustainable and equitable future. The collection of qualitative data such as oral histories through interviews and focus groups would add to previous literature on the experiences of Indigenous women in mining dependent communities through time.

CHAPTER 2.0: Identifying Capacity and Adaptation in Alberta's Coal Mining Communities using a Community Capitals Framework

> "Does resource extraction benefit local communities? Twenty years ago, William Freudenburg (1992) addressed this misleadingly simple question and concluded it depended largely on the time frame employed. In the short term, communities are likely to benefit from increased employment and capital investment, the so-called "shot in the arm," but in the long run such communities tended to far worse than those independent from resource extraction" (Perdue & Pavela, 2012, p. 368).

Introduction

In 2020 the Government of Alberta rescinded the 1976 Coal Policy that largely restricted coal mining activity in the province (Dryden, 2022; Fletcher & Omstead, 2020; Zeleny, 2022). Although controversial, the proposal to reinvigorate Alberta's coal industry was often premised on the sustainable economic opportunities it was going to provide to local communities. To gain a better understanding of the potential for these economic benefits, one can look to the future but can also look for lessons learned from history.

The history of coal mining in Alberta spans back to 1874 and has shaped many aspects of Alberta's social, economic, and ecological landscape. Although there are mainstream narratives of wealth and prosperity, a closer look reveals how coal mining led to significant economic prosperity for some but significant hardship for others (den Otter, 1975). Communities such as Hillcrest, Nordegg, and Rosedale faced numerous kinds of social and ecological stresses. Their ability to cope and adapt and otherwise build sustainable livelihoods depended on different factors or capitals (e.g., financial, natural, human, social, and political) (Bercuson, 1978; den Otter, 1973).

As Alberta embarks on a new period of exploration and development of coal reserves, interest in supporting the local and regional economies continue to be important. However, larger-scale factors, including the ecological and human risks of coal mining and concerns about how the mining and use of coal misalign with Canada's commitments on climate change, are also at the foreground of public debates and decision-making.

With the aim of contributing to the literature on resource dependent communities. This paper shares outcomes of a detailed review of archival records about the lives and livelihoods of mining communities of Hillcrest, Nordegg, and Rosedale during the period of 1874 to 2022. A

particular focus is on the boom period of 1874-1919. The archival evidence found through the research was interpreted through a community capitals framework (financial, natural, human, social, and political) with the aim of developing a clearer understanding of the dynamic factors that impact the livelihoods of mining towns in Alberta (Bebbington & Perreault, 1999; Beckley et al., 2008; Emery & Flora, 2006; Kais & Islam, 2016; Thompson & Lopez Barrera, 2019; Wu & Tsai, 2014).

Literature Review

Resource Dependency

Mining development, like other forms of resource extraction, is generally viewed as an opportunity for improving local livelihoods. The Canadian economy, including that of Alberta, has been largely grounded on this model of economic development since before confederation. Although it has brought great wealth and "development" to some, it has led to hardship for others (Freudenburg, 1992; Perdue & Pavela, 2012). Many resource dependent communities reliant on mineral resource development are caught within a cycle of underdevelopment that is associated with poverty, marginalization, environmental losses, as well as problems of poor health and well-being (Frickel & Freudenburg, 1996). Indigenous Peoples, in Canada and elsewhere, are among those most vulnerable to social and ecological impacts of mining owing to the legacies of colonization (Bainton, 2020; Howitt, 2001).

Counter-intuitively, this pattern of "underdevelopment" and environmental injustice is particularly true in economies well-endowed with resources; a phenomenon coined the "resource curse" (Sachs & Warner, 2001). The resource curse, although defined around markers such as national GDP, has regional characteristics and implications. In the United States, for example, counties heavily dependent on mining, although gaining some short-term employment, tend to have higher proportions of households living in poverty and the highest rates of "extreme" poverty (Elo & Beale, 1985). In Alberta, a similar regional analysis suggests the short-term economic opportunities of the oil industry have come at the price of lower overall long-term income growth owing to boom-bust cycles (which cause inefficiencies in development), crowding out effects which limit diversification, as well as problems of governance (e.g., rent-seeking, overspending versus investment) (Parlee, 2015). Parlee (2015) suggests that for small towns in Alberta, including those of Indigenous Peoples, avoiding the resource curse and

building more sustainable livelihoods, is a function, not only of considering the financial capital and flows but also human, social, ecological dimensions of development. However, this analysis did not focus on mining activity, nor did it look at historical and long-term patterns and trends.

Building off the analysis by Parlee (2015), this paper uses the community capitals framework (Emery & Flora, 2006) to analyze how coal mining communities have over the last 150 years experienced and responded to the opportunities and challenges of resource dependency. By examining the assets, capabilities, and resources found within, and available to, communities as they respond to changes seen over the last 150 years, we can develop a more fulsome understanding of the position of Alberta coal communities in the narrative of Alberta's boom-bust economy.

Community Capitals Framework

This paper use community capitals as the lens through which we interpret the problem of resource dependency faced by Alberta coal-communities. All of the community capitals referenced in this paper (natural, financial, social, human, political) are resources that can be deployed in different ways leading to positive or negative outcomes. One example of this is through the deployment of social capital. Although more common defined in terms of four capitals (financial, human, social and natural), we also highlight the important role of political capital or power which mediates how other capitals are interpreted and mobilized (Beckley et al., 2008; Bell & York, 2010; Gaventa, 1982; Lewin, 2019; Thompson & Lopez Barrera, 2019). Power in mining communities is inequitably distributed; elites have historically tended to capture more of the benefits and be little exposed to the harms that are part of the mining process or are left behind when mines are closed (Bell & York, 2010; Gaventa, 1982; Lewin, 2019; Thompson & Lopez Barrera, 2019). Thus, political capital in this paper is defined as the sociopolitical and/or economic interests that limit or create opportunities for community to respond to stresses experienced by their communities.

Natural capital includes benefits and disbenefits that come from the environment (e.g., coal as a resource to be mined and sold commercially). It is defined as the physical assets of a geographic location, including weather, geographic isolation, natural resources, and amenities. In our analysis we recognize coal as both an asset and a harm in so far as it has had many adverse human health, social, and ecological impacts in coal mining regions. Given the contribution of

coal mining to the carbon footprint of Alberta and Canada, and the realities of the growing climate crisis, these harms are now recognized as far more than local. Financial and human capital have been the common and popularized elements of mining development analysis and are intertwined in complex ways.

Financial capital refers to the monetary assets that are invested in infrastructure in support of a mining project. This capital refers to the assets needed and provided for goods and services, as measured in terms of monetary value. Human capital more fundamentally refers to the labour needed to run the mine with the definition being the skills and abilities of people to

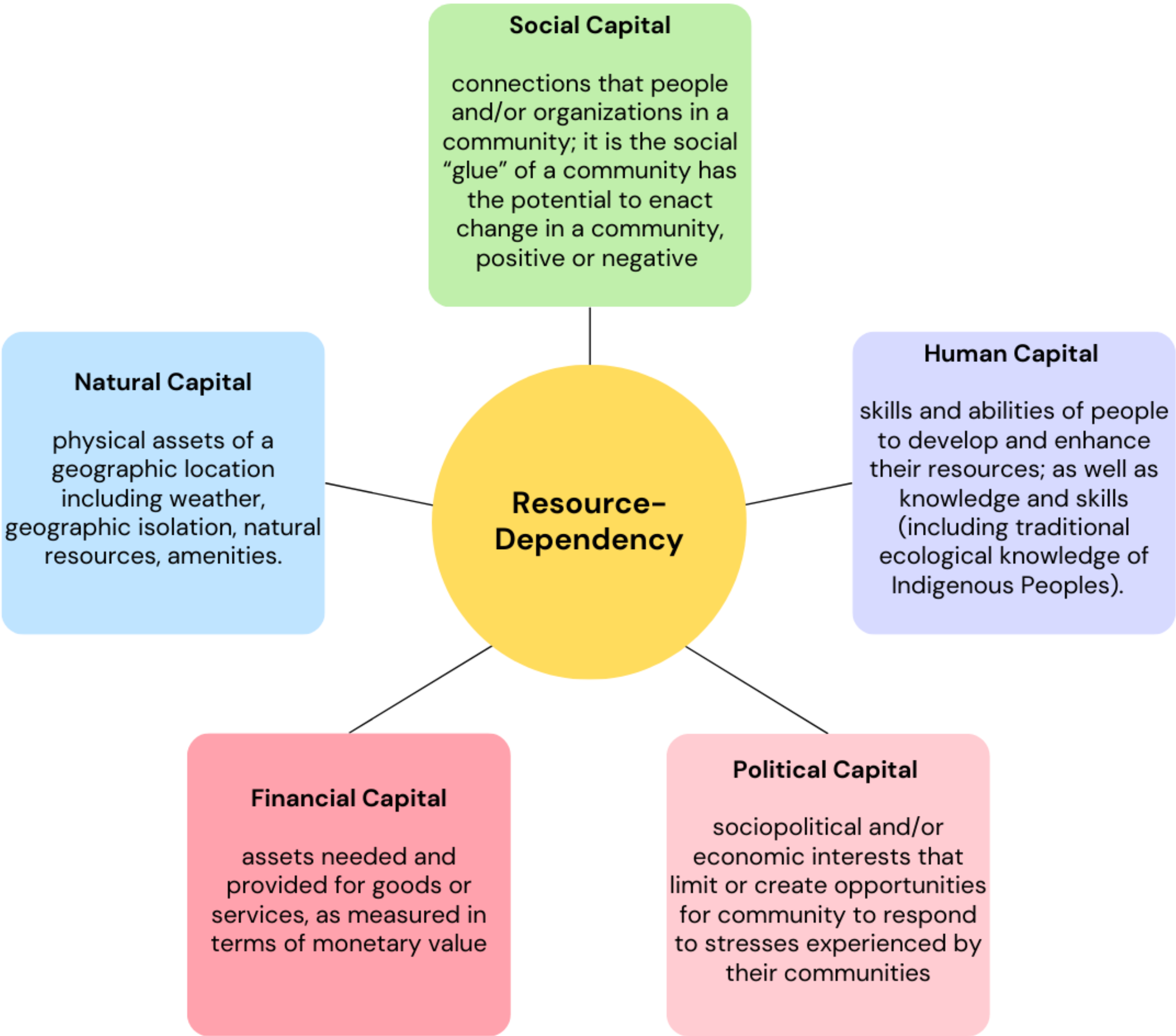

Figure 1. Capitals framework for interpreting resource dependency.

develop and enhance their resources; as well as knowledge and skills. While sometimes synergistic more often than not there are tensions and conflict between those who hold wealth in mining communities and those represented as the working class. In many coal mining regions of Canada and elsewhere, narratives about the hardships of mine workers have been common and are integrated in population culture including music, poetry, and theatre (in Appalachia and Eastern Canada). Equally poetically represented in popular culture are the narratives of communities coming together in times of hardship to help one another and work together to meet various kinds of financial and ecological crises. It is this sense of community or social capital that has historically been overlooked in analysis of how communities cope and adapt to the stresses and opportunities created by mining development projects (Parlee, 2015). Social capital refers to the connections of people and/or organizations in a community. It is the social "glue" of a community and it is a resource that can be used to enact change in a community, positively or negatively.

Setting

Coal mining in Canada has a long history dating back to early periods of colonization (over 250 year ago) when mines in present day Nova Scotia were needed to support the construction of the fortress of Louisburg in the 1700s (Cape Breton Island et al., 2010; "History of Mining | Miners Museum – Glace Bay Nova Scotia Canada," n.d.; Pascucci et al., 2000). Over the last 250 years, it was coal mines in Cape Breton that serviced settlement and development in Quebec and Ontario. Beginning in the late 1800s, coal began to be mined in Alberta. Initial mining activities were small in scale used only basic technology. By the 1990s, Alberta became a major coal producer in Canada.

Although coal production is forecast to decline in the coming decades several coal mines are proposed for development continued operation, near the Crowsnest Pass in Alberta (Tent Mine), the major Vista Mine and the Grassy Mountain mine (the latter mine was not approved by the provincial and federal government) (Dryden, 2022). Part of the anticipated decline in coal production and use is owing to concern for the local environment as well as commitments to reduce greenhouse gas emissions and Canada's carbon footprint (Edwards, 2019; Lysack, 2015).

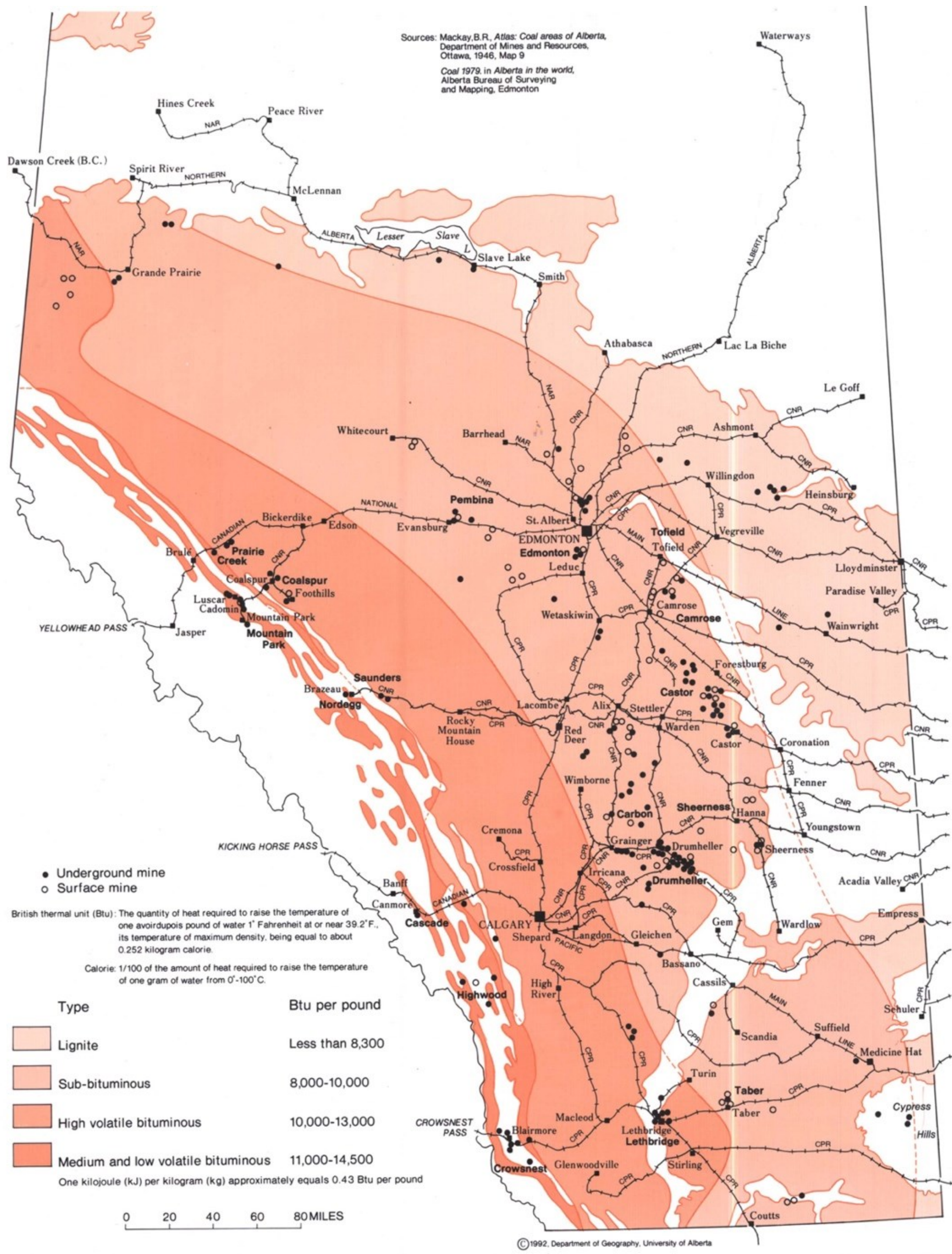

Figure 2. Map detailing mines, railways, and coal classifications in Alberta (Department of Geography, University of Alberta, 1992a).

The shift away from coal has been complicated by provincial government ambitions to continue to support the coal industry (Dryden, 2022; Fletcher & Omstead, 2020).

Coal mining communities in Alberta were often referred to as 'company towns.' This label stemmed directly from the control that the coal companies had over the communities where their miners lived (Bercuson, 1977). A helpful definition of what a company town is can be found in the fourth volume of the Encyclopedia of the Social Sciences, "a community is known as a company town when it is inhabited solely or chiefly by the employees of a single company or group of companies which also owns a substantial part of the real estate and houses" (Crawford, 1991). The beginning of the coal mining industry in Alberta (1874 to 1919) was characterized by company towns. Understanding that the historic communities this paper focuses on are not only coal mining communities but also company towns allows us to understand the impacts of resource dependency in these communities more clearly. These communities were created to be completely dependent on coal as a resource. Further, Indigenous Peoples in Alberta at the beginning of the coal industry were among those who suffered significantly; in addition to the land expropriation and disease impacts associated with settlement and development (including railways), Indigenous Peoples were economically excluded from the benefits of coal mining and would have carried the burden of both social, cultural, and ecological loss.

The case studies in this paper are the towns of Hillcrest, Nordegg, and Rosedale. These towns were chosen to represent company towns in Alberta for several reasons. The first is that they are all located in different coal producing areas. Hillcrest is located in the Crowsnest Pass, Nordegg can be found west of Red Deer in the Eastern Slopes, and Rosedale is near Drumheller. All three of these mines were in major coal producing areas but there is no overlap between the three. Another reason why these towns serve as the case studies for this paper is due to the fact that records of these towns are easily accessible and date back to the beginning of each community. This is important for the purposes of this paper because the towns can be traced through time. One notable reason why all three towns are able to be traced through time is that each community faced specific, extreme challenges; Hillcrest experienced an explosion in the mine resulting in disaster, Nordegg was known to be a town shaped by corporate paternalism, and Rosedale was recognized by the coal mining industry to be mismanaged and corrupt. While these circumstances were extreme conditions in all three towns, none of these challenges were

unique to Hillcrest, Nordegg, and Rosedale. These conditions (mining accidents/disasters, corporate paternalism, and corruption) were common in all mining communities in the province. However, Hillcrest, Nordegg, and Rosedale provide clear examples of what mining communities in different contexts looked like at the beginning of Alberta's coal industry.

Methods

This research was conducted using a systematized review process (Grant & Booth, 2009). The first phase of this literature review was carried out from July to October 2021. The aim of this initial review was to outline the context of resource dependency in Alberta at the beginning of the coal industry, specifically focusing on 1874 to 1919. Then this research was revisited from January to March 2023 to broaden the literature review to include findings from 1920 to 2022 in order to provide a broader time period. The focus of this review is centered on the beginning of coal mining from 1874 to 1919 however, when exploring resource dependent communities the modern context is important to include and so this review expanded from 1920 to 2022. The sources that were used included journal articles, primary sources, gray literature, and dissertations. Primary sources that were included constitute memoirs, photographs, and diary entries.

Case Studies

Table 1. Descriptive information about case studies: Hillcrest, Nordegg, and Rosedale.

Hillcrest (1905 – 1939)	Located in the Crowsnest Pass, Hillcrest Mine mined bituminous coal. The mine was connected to the Canadian Pacific Railway (CPR) by the Hillcrest Mine Railway. Hillcrest was known as an excellent place to live as a miner with an excellent school, access to healthcare, and the ability to own your own home. Hillcrest miners, along with other mines in the Crowsnest Pass belonged to the United Mine Workers of America under District 18.
Nordegg (1911 – 1955)	The town of Nordegg was an isolated community located along the Eastern Slopes of the Rocky Mountains. The mine produced bituminous coal and was connected to the Canadian Northern Railway (CNR). The founder of the town, Martin Nordegg, ensured there was a school and hospital in the town. At the beginning of industry, miners were not involved in larger unions but there was a small local union for miners in Nordegg.

Rosedale (1911 – 1952)	Rosedale, located near Drumheller, produced lignite coal. The mine was connected to the Canadian Pacific Railway (CPR). Rosedale had a school that was poorly equipped and the miners would complain that the school was not adequate for the children in the community. Additionally, there was no doctor or hospital in Rosedale. Before 1919 union activity in Rosedale was prohibited by the Vice President and Managing Director, J. F. Moodie. In 1919 Rosedale miners joined the United Mine Workers of America (UMWA).

Hillcrest

The mining town of Hillcrest is infamous for the Hillcrest Mine Disaster in 1914. It was the largest mining disaster in Canada with 189 deaths. Hillcrest is located in the Crowsnest Pass close to the town of Frank, which is also known for the disaster of the Frank Slide. The Crowsnest Pass is a mountain pass in the southern Rocky Mountains in both British Columbia and Alberta. The Crowsnest Pass was rich in coal and was home to several coal mining communities. Although the tragedy of the Hillcrest Mine Disaster is thinking of the community of Hillcrest it is important to note that company town had a rich history before the disaster.

The Hillcrest Coal and Coke Company, established by American Financiers, opened the mine in Hillcrest in 1905 (Buckley, 2004). The founder of Hillcrest Coal and Coke Company was Charles Plummer Hill, born in Seaford Delaware in 1862 (Hanon, 2013). Other shareholders in the company included members of Hill's extended family. Hill came from a working class background and found work in exploration and prospecting trips in British Columbia and Alberta. In the early 1900s Hill was one of the major players in the exploration of coal in the Crowsnest Pass area. In 1902, Hill purchased land in Crowsnest Pass where he later built Hillcrest, both the mine and the town. In order for the mine to provide coal to the Canadian Pacific Railway line in the Crowsnest Pass, Hill had to build a short rail line about two miles long to transport coal to the railway (Hanon, 2013).

Hillcrest Coal and Coke Company was known for being kind employers that provided miners with a better quality of life than surrounding mining towns (Hanon, 2013). A critical contributor to the quality of life in Hillcrest was that miner's in Hillcrest were able to own their own homes if they wished, unlike many other company towns in the Crowsnest Pass and Alberta

(Hanon, 2013). The company also supplied running water and electricity without cost. In addition to the unique housing situation, the Hillcrest Coal and Coke Company invested heavily in the school in the town. The school at Hillcrest had separate rooms for each grade, proving to be a much more elaborate school than others in the area or in other company towns.

The excellent school conditions combined with the housing ownership opportunities contributed significantly to the lives of the miners in Hillcrest. The miner's in Hillcrest experienced a level of security that other miners in Alberta did not have. Having control over their housing and knowing that their children's education was taken care of freed up space for the miners in Hillcrest to invest in their community. The community life, while centered on the mine, was also rich in other areas including home, church, and the union hall (Hanon, 2013). For example, in 1914 (before the disaster), one miner purchased two movie projectors and opened a movie theatre in the union hall (Hanon, 2013).

Hill was also a fair employer, during a strike in 1909 he met with union leaders to come to an agreement in regards to his worker's wages. The strike was organized by the United Mine Workers of America (UMWA). The Hillcrest mine fell under District 18 of the UMWA with other mines in the Crowsnest Pass. When Hill met with the UMWA it was notable because the coal companies in the area were not impressed by the work that the UMWA was doing in BC, the Crowsnest Pass, and Lethbridge. While Hill was not interested in meeting the demands of the UMWA he made an appearance in front of the Joint Committee to illustrate his point of view and intentions for wages. After Hill's presentation, the Joint Committee ruled in his favour, and he was able to maintain the same wages for his miners moving forward (Hanon, 2013).

While Hill was viewed as a fair employer, he faced many frustrations while managing the Hillcrest mine. A large frustration for Hill was the bureaucracy that came along with operating a mine. He was not well liked by members of the management at the mine as well as officials at neighbouring coal companies. As a result of these frustrations, Hill decided to switch ownership and management of the mine in 1910 (Hanon, 2013). However, Hill still remained a director in the company and he was still a major shareholder. In the spring of 1910 he decided to leave his residence in Hillcrest permanently and went to Europe with his family (Hanon, 2013).

In 1914, the Hillcrest community was caught off guard when an explosion occurred at the Hillcrest mine at 9:30 in the morning on June 19, 1914 (Jones, 1998). With 189 miners dead and only 48 survivors, the Hillcrest Mine Disaster is categorized as Canada's most deadly mining disaster to date (Buckley, 2004). The explosion changed the community in ways that are undeniable, overnight there were widows and fatherless children at Hillcrest. At the time, the town of Hillcrest was a very tight knit community and surviving single miners and new miners coming in after the events married the widows of the men lost in the explosion (Hanon, 2013). The Province of Alberta also appointed a permanent commission titled the Hillcrest Relief Commission and granted $20, 000 for the widows and orphans left behind. This was in addition to the $50, 000 granted by the federal government for the same purpose. During this period immediately following the explosion at Hillcrest, the CPR closed a mine in Hosmer. Some think that the closure at Hosmer was a strategic move to solve the issue of replacing the lost miners at Hillcrest, and also to remedy the widows and orphans at Hillcrest with the hope that miners from Hosmer would move to Hillcrest and choose to marry (Hanon, 1914). While this theory cannot be proved with absolute certainty, it is known that many miners from Hosmer found employment at Hillcrest and many did eventually marry the widowed wives of the Hillcrest miners.

Less than a month after the explosion, on June 7, 1914, the mine resumed operation with around 80 men working per shift (Hanon, 2013). Later in the same month, 140 men arrive in Hillcrest to take the jobs of the victims of the explosion. Buckley (2004) describes the conditions at Hillcrest at this time as being deeply rooted in community. Many of the surviving and remaining miners at Hillcrest felt that they had no other option than to continue on working at the mine. When miners would try to find work in a different profession they had a very challenging time transitioning away from mining, their skills were not transferrable to other industries or professions. Additionally, coal miners in these communities often were following in the footsteps of their fathers, meaning that coal mining was a family occupation.

Little is recorded about the daily operations at Hillcrest in both the mine and the town in the years following the explosion. Most of the attention is placed on the beginning of the mine, and the disaster itself. However, from the Alberta Coal Commission of 1919, we know that the cost of living in Hillcrest was as high as some of the urban spaces in Alberta, including

Lethbridge (Bercuson, 1978). This high cost of living was unusual for company towns in the province.

Hillcrest Collieries went into liquidation in 1938 and the mine closed at the end of 1939. Following the mine closure, the town of Hillcrest was faced with a major disturbance. The industry that the town centered around was no longer a presence in the community. Some of the residents in Hillcrest panicked and sold their houses at a loss, but other miners found work elsewhere in the Crowsnest Pass and continued to live in Hillcrest (Crowsnest Pass Historical Society, 1979). Today Hillcrest is a residential community in the Crowsnest Pass where people still live.

Nordegg

In 1906, a German photochemist arrived in Canada to explore the development of coal along the Eastern slopes of the Rocky Mountains (Belliveau, 1999; Nordegg, 1971). He acted on behalf of wealthy German investors and two powerful Canadian railway promoters, William Mackenzie and Donald Mann (Belliveau, 1999; Nordegg, 1971). The German photochemist, Martin Cohen, later changed his name to Martin Nordegg and eventually founded a town which he named after himself. The town of Nordegg was adjacent to one of the main mines in the area operated by Brazeau Collieries (Belliveau, 1999). The Brazeau Collieries was owned by the German Development Company (Bercuson, 1977). The town of Nordegg is located east of Red Deer, Alberta and was located at the end of the Canadian Northern Railway route from Red Deer.

Guided by members of the Stoney Nakoda First Nation, Nordegg was able to access and assess the coal seams along the Eastern slopes (Nordegg, 1971). After travelling to the coal seams in 1906 and taking samples of the coal back to Germany, Nordegg's German investors encourage him to make a claim to the land (Nordegg, 1971). Thus, in 1907 Martin Nordegg made an official claim to the land and began to build the town of Nordegg (Nordegg, 1971). As Nordegg began to make preparations for his town he noted that everything must be in pristine condition. It was important to him that the town of Nordegg should be a reputable place. As an immigrant himself, Nordegg felt that he had to prove himself and one way that he could do so was through the planning and function of his town. Nordegg chose to live in the town and only

travel away when necessary. This allowed him to keep a close eye on the activities in the town and if there were any areas of unrest.

As the town was being built Nordegg ensured that the cottages where the miners would live were in pristine condition and it should be noted that the living conditions in Nordegg were much better than other mining towns in Alberta at the time (Bercuson, 1977, 1978; Nordegg, 1971). Once the first woman arrived in town Nordegg realized that he had not anticipated the family life of his employees. As more miners arrived with their families, many with young children, there was "a clamour for a school" (Nordegg, 1971, p. 195). A cottage was set aside as a school house and Nordegg hired two schoolteachers.

Aside from the cottages, Nordegg boasted a hospital, a policemen's cottage, an officials club, a movie theatre, a dance hall, and a miners club. The hospital at Nordegg was the best equipped hospital west of Edmonton (Bercuson, 1977). Additionally, due to the isolated location of the town, Martin Nordegg saw the need to set up shops within the town limits so that the miners and other occupants of Nordegg had access to many, if not all, of the luxuries of an urban setting. In the regard, the town of Nordegg was significantly more equipped than other company towns. It seemed as though miners were happy to find work in Nordegg because of the reputation that proceeded it.

The town itself was split in two sections, one on top of a hill and the other at the base of a hill. The occupants at the bottom were mainly miners, shopkeepers, and schoolteachers. Martin Nordegg lived on the top of the hill with some mine officials and their families, policemen, and the doctor. This separation of the town was concerning to Martin Nordegg, he feared that the distance between the lower and upper communities in the town would cause a social divide. Later he admits that his fear was warranted:

> *My feeling of hesitancy regarding the separation from the lower town proved to have been true. It created a caste of superior men, and even more so of superior women. The ladies would not mix socially with the women living below the railway line, and all my attempts to level this separation failed utterly* (Nordegg, 1971, p. 196).

Although Martin Nordegg wanted his town to be impeccable, he was shocked to find that there was still theft and petty crimes occurring among the miners. In order to remedy this he decided to

pay his miners in company scrip instead of real currency (Bercuson, 1977; Nordegg, 1971). Nordegg describes the company scrip as coupon books saying,

> *I conceived the idea of issuing our own money and devised the following scheme: Coupon books were printed. The cover of the little book had lines for the name of the owner. Inside were pages with perforated coupons, in denominations of five, ten, twenty-five, and fifty cents. When a man entered the employment of the company, such a book was issued to him on credit, his name written on the cover, and the total amount of the coupons in the book was charged against him on the future payroll. He, or the members of his family, had to present the book when making purchases in town at the store, the butcher's the baker's, the cobbler's, the barber's, even at the picture show, the poolroom, and the post office. Of course everybody was personally known, and torn-out coupons were not honoured; the book had to be presented, and the storekeeper had to tear out the coupons and every week turn them in at the mine office, which issued a cheque against the amount of coupons recieved. Consequently, a book lost was no loss to the owner, as it was replaced by the company and the lost book stopped for payment. The formerly frequent thefts of money ended immediately, and the system worked very satisfactorily.* (Nordegg, 1971, pp. 209–210)

By the 1940s Nordegg had gained a reputation of being one of the finest mining towns in the province (Alberta Culture and Tourism, n.d.). The town had a bustling social life with plenty of activities for the miners to enjoy, including a well respected drama society (Alberta Culture and Tourism, n.d.). Brazeau Collieries was recognized as a mine with high standards that was well run (Davies, 2002). However, tragedy struck in 1941 when a gas explosion killed 29 miners (Davies, 2002). Brazeau Collieries was found criminally responsible and was fined $5,000 (Davies, 2002). The mine closed for six weeks following the explosion and implemented new practices (Davies, 2002). The demand for coal was high during the second world war and shortly after which allowed Brazeau Collieries to remain in operation but the explosion marked a downturn for the mine and town. In 1955 the mine closed and the company went bankrupt (Alberta Culture and Tourism, n.d.). Today Nordegg is recognized as a ghost town.

Rosedale

Rosedale mine was operated by Mr. J. F. Moodie, other wise known as Frank Moodie. Moodie was the Vice President and Managing Director of the Rosedale Coal and Clay Products Company. The company leased the lands that the Rosedale mine and town were situated on in 1911 (C. M. Smith, 2000). Rosedale was located on the northern bank of the Red Deer River about 80 miles northeast of Calgary, near Drumheller. Rosedale was isolated in the sense that it was far from resources such as a hospital, however, it was relatively close to other small mines

such as Star Mine. The coal from the mine had to be loaded into wagons and ferried across the Red Deer River before it could be loaded into train cars for the Canadian Northern Railway.

In the Alberta Coal Commission of 1919, Moodie was singled out as one of the worst mine operators in the province. Many of the miners who attended the commission named the Rosedale mine as being severely mismanaged at the hands of Frank Moodie (Bercuson, 1978; Smith, 2000). In stark contrast, early in 1911 (when the Rosedale mine was formed) a Calgary newpaper reported that the conditions at Rosedale appeared to be sufficient to care for "the whole man: body, mind, and soul" (Smith, 2000). The living accommodations were described as clean and there was mention of recreation rooms and tennis courts (Smith, 2000). Rosedale was given the image of a model mining village. So what caused the accusations made at the 1919 Coal Commission?

To begin, Frank Moodie insisted on running all operations of the mine from 1911 to 1921 (Smith, 2000). He hired the school teachers and managed the school (Bercuson, 1978; Smith, 2000). When the miners would ask him to provide better school facilities for their children, Moodie would refuse (Bercuson, 1978). The miners claimed that 20 to 24 children were forced to learn in an "awfully small shack" (Bercuson, 1978, p. 95) and one teacher was expected to teach 5 or 6 grades at a time. J. Hillary, a miner at Rosedale, explains that the school in Rosedale was "just an old shack up at the mines, and they dragged it down and made a school of it" (Bercuson, 1978, p. 100). He also mentions that "the kids has got to put their fur coats on and shows to sit in the school and keep warm" (Bercuson, 1978, p. 100). Since Moodie financially supported the school and owned the land it was operated on he believed that he was fully in charge of the decisions made about the schoolhouse and schoolteacher (Bercuson, 1978). Additionally, while other schools in the area would allow children from other towns to attend their schools out of necessity, Moodie refused to let the children from the neighbouring Star Mine attend the school at Rosedale (Bercuson, 1978). Needless to say Moodie was not well liked by the miners of the region.

In addition to being firm about the poor school conditions, Moodie also refused to hire a doctor for the mine. One of the longstanding disagreements between the miners at Rosedale and Frank Moodie revolved around medical care. During his time managing the mine and town, Moodie remained staunch in his belief that hiring a doctor for the mine was unnecessary. He

himself acted as a physician for the men working in his mine. He would often stitch up wounds that were the result of everyday mining operations (Bercuson, 1978; Smith, 2000). The miners working in Rosedale did not think highly of Moodie's work as a physician but had no other choice as the two hospitals in the region, Wayne and Drumheller, were too far to travel to for a minor wound (Bercuson, 1978). In 1919, Moodie's refusal to hire a doctor caught up to him as the Spanish Influenza swept through Rosedale (Jones, 1998; C. M. Smith, 2000).

Many miners at Rosedale saw the poor conditions that they faced as a result of them not being included in a union like the UMWA in Lethbridge, Crowsnest Pass, and BC mines. In fact, Moodie was vehemently against unions. He would give preference when hiring new miners, to miners that did not have any connections to unionized mines (Jones, 1998). In 1918, a situation occurred that solidified the divide between Moodie and the miners at Rosedale that wished to join the UMWA. A member of the UMWA was dispatched to try to form allegiances with the miners in Rosedale. Moodie heard of this plan and decided to tie the man up and threaten him on the Red Deer River bridge. After hearing about this abuse, a miner by the name of Emile Usibella from Star mine decided to carry on the work of the UMWA. This time when Moodie found out about Usibella's plans he tied Usibella up for six hours and threatened him at gun point (Jones, 1998). This spurred on the first ever strike at Rosedale mine. Moodie was outraged by the reaction of the Rosedale miners and decided to hire a private detective to spy on his men (Jones, 1998). Eventually, Rosedale did join the UMWA but they were one of the last mines to do so and it was right before the larger union movement, the One Big Union.

Mining in Rosedale remained operational for much longer than both Hillcrest and Nordegg, with mining activity finally ending in the town in the 1952 (Heritage Community Foundation & University of Alberta Libraries, 2009). There are not many details concerning the activities in Rosedale following 1919 but it is known that Frank Moodie left Rosedale sometime in 1920 to pursue a future career in oil (Hlady, 1988). Rosedale is now a small suburb of Drumheller, Alberta (Heritage Community Foundation & University of Alberta Libraries, 2009).

Overview of Capitals in Alberta's Coal Mining Communities

The period from 1874 to 1920 was the beginning of the coal mining industry in Alberta. The historical review presented in this paper unpacks how the capitals framework can be applied to coal mining communities during this time. By 1890, the federal government has already

uncovered the vast potential for coal mining in Alberta, then referred to as a provisional district of the Northwest Territories (den Otter, 1975). The discovery of coal in the Rocky Mountains was met with enthusiasm from many including Sir Alexander T. Galt, one of the Fathers of Confederation (den Otter, 1973, 1975). The records show that coal mining in what is now the province of Alberta began in 1874 (Winter et al., 2021). However, the coal mining industry in Alberta did not start to take off until the 1880's when Galt began to enlist the support of London financiers to form the North Western Coal and Navigation Company to build and operate the first coal mine in Alberta (den Otter, 1973, 1975). This venture was in tune with the Canadian dream of the settlement of Western Canada and building a transcontinental railway (den Otter, 1973). Sir John A. Macdonald noted that the discovery of coal in Alberta was "a very important bearing upon the development of that country" (den Otter, 1973). Coal mining in Alberta was celebrated as it provided inexpensive fuel for the settlers of Western Canada, it created employment opportunities for settlers, and it was essential for the expansion of the transcontinental railway (den Otter, 1973). Thus, the rise of the coal industry in Alberta was viewed as a critical way to develop Western Canada.

The nature of the coal industry before 1919 is very different than the current context of coal mining in the province. After World War II the industry began to shift away from subsurface mining into surface mining. This brought new sets of challenges for coal mining communities. However, the capacities for communities to respond to these changes is largely based on the foundations of coal mining communities set from 1874 to 1919. This section provides a review of the financial, natural, human, social, and political capitals present in coal mining communities with a focus on the years 1874 to 1919.

Financial Capital

Mine Infrastructure.

The coal industry went through several changes with the advance of mechanization. From 1874 to 1919 the industry was characterized by underground coal mines that ran on the manual labour of coal miners. These mines had minimal technology to support them and miners would physically remove coal from the mine and place it in carts to bring it out of the mine (Bercuson, 1978; Hanon, 2013). While underground coal mining was the standard during this time, there were some small surface mines in operation which produces just over one percent of all coal

produced between 1874 to 1945 (Piper & Green, 2017). There were only 66 surface mining operations that opened and closed before 1945 (Piper & Green, 2017). Comparing this to the 752 underground coal mines that opened and closed before 1945, surface mining was not as notable as subsurface mining. As the coal industry began to decline in the 1940s and 50s many miners began to lose their jobs (Piper & Green, 2017). During this decline, there was a shift to surface mining. By the 1970s there were significantly fewer mines still in operation and the majority of mining operations were surface mines (Piper & Green, 2017). Instead of requiring skilled labour for coal mining, surface mining requires heavy machinery and labourers with the skills to operate them (Piper & Green, 2017).

Regional Infrastructure.

Without the advancement of transcontinental railways the coal industry in Western Canada, specifically Alberta, would not have had enough demand to incentivise resource extraction in the area. In fact, as companies were placing land claims on the areas with coal seams, they were actively searching for partnerships with railways (Bercuson, 1977; den Otter, 1973, 1975; Nordegg, 1971). This pattern of connection between coal mines and railways was present right from the beginning of coal mining in Alberta. Sir Alexander T. Galt used the North Western Coal and Navigation Company to not only start Alberta's first coal mine but to also build and operate from the colliery to the Canadian Pacific Railway (CPR) (den Otter, 1975). By 1896, the Galt mines were the largest producers of coal in Alberta and were essential distributers for the CPR (den Otter, 1975).

The extension of the CPR through the Crowsnest Pass in the late 1890's was a turning point for the coal industry in Alberta (den Otter, 1975; Van Tighem et al., 2007). The Crows Nest Pass Coal Company had an agreement with the CPR at that time to provide coal for smelting and other purposes that proved quite lucrative (Bercuson, 1977; den Otter, 1975). The Crows Nest Pass Coal Company was able to sell coal to consumers in the west Kootenay and Boundary regions (Bercuson, 1977; den Otter, 1975). From then on, contracts between mining companies and railways became commonplace as it worked in the best interest of both parties (Bercuson, 1977; den Otter, 1975; Nordegg, 1971). By the end of World War I all the major coal seams in Alberta were known and larger mines were in contract with the railways (den Otter, 1975).

By 1920 the coal mines in Alberta had already established a pattern of dependency on the railways (den Otter, 1975). While the railways depended on Alberta mines to provide inexpensive fuel, if the mining companies had been unable to provide coal the impact would be that the railways would then have to source more expensive coal (den Otter, 1975). While this would have been inconvenient, the railways, particularly the CPR, were already purchasing more expensive coal from Pennsylvania for their eastern routes (Bercuson, 1977, 1978; den Otter, 1975). On the flip side, the coal mines entirely depended on the railways to consume their product and also for transportation of their coal for sale elsewhere (den Otter, 1975). Without the railways, the coal industry would have been incredibly limited with consumer demand being limited to the local level (den Otter, 1975).

This dependence was a huge roadblock for the Alberta coal industry. Not without effort, the province's coal industry was unable to successfully compete in any market other than the Canadian prairies (Bercuson, 1977, 1978; den Otter, 1975). There are several reasons for the market limitations including quality of goods, transportation costs, and insufficient tariff protection. In the Coal Mining Industry Commission of 1919, many of the miners and company officials shared complaints about the limited market for Alberta coal (Bercuson, 1978; den Otter, 1975). A huge frustration for these individuals was that Alberta coal was unable to break into the Winnipeg market (Bercuson, 1978). The main reason for the difficulty behind entering the Winnipeg market was that Alberta coal was unable to compete with Pennsylvanian coal (Bercuson, 1977, 1978; den Otter, 1975). Pennsylvanian anthracite coal was considered to be better quality than Alberta's coal (Bercuson, 1977, 1978; den Otter, 1975). This meant that while Pennsylvanian coal was more expensive than Alberta's coal the consumer in Winnipeg preferred to burn the American coal and Alberta's coal industry was unable to break into the market (Bercuson, 1977, 1978; den Otter, 1975). Further, the cost of transportation from Alberta to any prospective market (i.e. Montana, California, Manitoba, Ontario, etc.) was enough to discourage Alberta coal companies to compete in those markets (Bercuson, 1977; den Otter, 1975).

The coal industry began to change following World War II when the industry began to adopt surface mining (Piper & Green, 2017). This was coupled with a change in markets from railways to electrical energy. There was a change in the use of coal from transportation to electricity generation (Piper & Green, 2017). Additionally, a push for oil over coal altered the

place of coal in Alberta's economy (Piper & Green, 2017). In 1948, the CPR commenced a policy of "dieselation" stating that it would result in lower overall operating and maintenance costs (den Otter, 1975). By the late 1950s the CPR no longer burned Canadian coal (den Otter, 1975).

Community Infrastructure.

Access to Education.

Many towns did not have schools at all. For example, in one mining community there were "100 or more" children that did not have access to a school (Bercuson, 1978, p. 111). The closest school was two miles away which was too far for the children to walk, especially in the winter when "it gets 40 or 50 below" (Bercuson, 1978, p. 110). Unfortunately, this was a common experience in the company towns of Alberta. One miner from Bankhead, Alberta explains that a major reason why he decided to stay in Bankhead was because of the school:

> *Prior to coming into Bankhead, I was travelling about to all the new mines that were developing and my family was not getting the education that they ought to, because in these camps there were no schools as a rule. When I came to Bankhead the school was some inducement for me to stay, and I have tolerated a lot of things and decided to remain there in spite of some friction I have swallowed* (Bercuson, 1978, p. 87).

Since 1920 the availability of education gradually increased for mining communities. Beginning in 1921 there was a push for increased supports for education in rural and isolated communities (Matsumoto, 2002).

Access to Healthcare.

Many company towns did not have access to healthcare. Hospitals and doctors were not present in every town. The towns that had both a hospital and doctor were very fortunate as the company towns in Alberta were often plagued with different diseases including influenza, sexually transmitted diseases, croup, and typhoid fever (Bercuson, 1977, 1978; Van Tighem et al., 2007). The housing conditions and sanitary infrastructure in the company towns also detracted from the overall health of the community. In Bankhead, the water that was available to the miners was alkali water. If you drank a cup of alkali water "you lose a day's work or two" (Bercuson, 1978, p. 115). One miner explained that, "I took a drink about a month ago, and it took the doctor two months to fix me up. I was just as weak as a chicken" (Bercuson, 1978, p. 115).

The miners also had to deal with the unsanitary conditions of the wash houses and toilets. In Bankhead, the wash room was made from cement with a low roof. The miners would "all wash in the same place where the clothes are, and the place is just one mass of steam and moisture, and there is not in the winter time sufficient heat to dry up the moisture that has come from the steel boxes to dry that up and made sufficient heat to keep the clothes dry" (Bercuson, 1978, p. 88). Additionally, the toilets in the dwelling houses were filthy. A. P. Parker from Newcastle explained that he requested a sanitary inspector to check the conditions of the toilets in the town (Bercuson, 1978, p. 117). In Newcastle, there were "about 40 men entitled to go to one toilet" with no one tasked with keeping it clean (Bercuson, 1978, p. 117). He claimed that the inspector put in a true report about the state of the toilets and was promptly fired by the company. Later they sent another man in to inspect the toilets and "he put in a report to help the company" (Bercuson, 1978, p. 117).

In addition to the limited healthcare present in company towns, the doctors that were in these communities were often employed by the coal company (Derickson, 1992). Doctors employed by the companies were often providing less than satisfactory healthcare from the miner's perspectives (Derickson, 1992). One miner in Alberta claimed that when a miner was injured in the mine he was taken back to his shack until a doctor decided to travel five miles to attend to him (Derickson, 1992). In 1916 an article was published by the industry's leading trade publication that was titled, "Is Your Mine Doctor a Fake or a Physician?" (Derickson, 1992). This article described that doctors in mining communities often failed to give immediate attention to miners who were injured in the mines leading to unnecessary deaths (Derickson, 1992).

Housing.

Company towns in Alberta had a large range of housing available for the miners. Generally speaking, married miners would have a residence that would be specifically for their family unit. Whereas single miners would often end up in shared accommodation. In Newcastle, there were bunkhouses, shacks, and stand-alone houses (Bercuson, 1978). The bunkhouses in Newcastle were referred to as "chicken coops" (Bercuson, 1978, p. 114). There were approximately 50 chicken coops in Newcastle. They were sleeping accommodations for single men that were "maybe about 14 feet square" and provided cots for five of six men (Bercuson,

1978, p. 114). Nearby in Rosedale, the bunkhouses had “only two or three rooms” and slept “about 40 or 50 all in one building” (Bercuson, 1978, p. 93). The shacks in Newcastle were slightly larger but with similar conditions and the stand alone houses were meant for married men with four rooms in each (Bercuson, 1978, pp. 114–115). Some of these accommodations had electric light, but none of them had running water (Bercuson, 1978, p. 115).

The allocation of bunkhouses, shacks, and houses was dictated in some ways by the hierarchal nature of the company town. Seasonal labourers were given accommodations that were lesser quality than the accommodations of contract miners (Bercuson, 1978, p. 30). This quickly turned into a positive feedback loop as the seasonal miners did not take care of their houses in the company town and were not incentivized to settle down in a company town because of the poor housing conditions (Bercuson, 1978, p. 30). Further, miners that were considered lower social status, such as certain classes of immigrants, were often provided worse housing than Canadian-born workers, or English speaking immigrants (Bercuson, 1977, 1978; Seager, 1985).

Natural Capital

Coal Production.

Coal is formed from the accumulation and compression of dead vegetation in the subsurface (Mohamad et al., 2013). There are four different types of coal; anthracite, bituminous, sub-bituminous, and lignite. Coal is differentiated into these four types by the amount of carbon present in each type. Lignite has the least amount of carbon, sub-bituminous has more carbon than lignite but less than bituminous and anthracite has the highest percentage of carbon (Mohamad et al., 2013). In Alberta there is lignite, sub-bituminous, and bituminous coal. From 1874 to 1919 anthracite was the favoured coal in the market (Bercuson, 1978). Anthracite was primarily mined in the United States in Appalachia (Bercuson, 1978). Lignite was the least desired coal because it did not burn as long as anthracite or bituminous coal. The quality of bituminous, while higher than lignite, was still considered to be lesser than anthracite.

After 1900 the industry began to produce coal more consistently to meet the consumer demands presented by the railways and rapid population growth. Further, World War I, 1914 to 1918, generated another expansion for the plants and investment in Alberta Mines, especially in the central and northern fields (Seager, 1985). The expansion that the war brought pushed Alberta’s

coal industry ahead of British Columbia's (Seager, 1985). In 1920 Alberta's output of coal reached a record seven million tons compared to British Columbia's output of three million tons (Seager, 1985).

Coal production in Alberta continued to rise from 1920 to the late 1940s (Piper & Green, 2017). In 1947, oil was discovered in Leduc, Alberta and it changes the course of coal mining in Alberta (Piper & Green, 2017). Immediately following this discovery coal production rapidly decreased in Alberta. Then in 1962 the coal industry shifted to surface mining and coal production rapidly increased and largely exceeded previous coal production (Piper & Green, 2017). From 2000 to present day production of coal has been gradually declining.

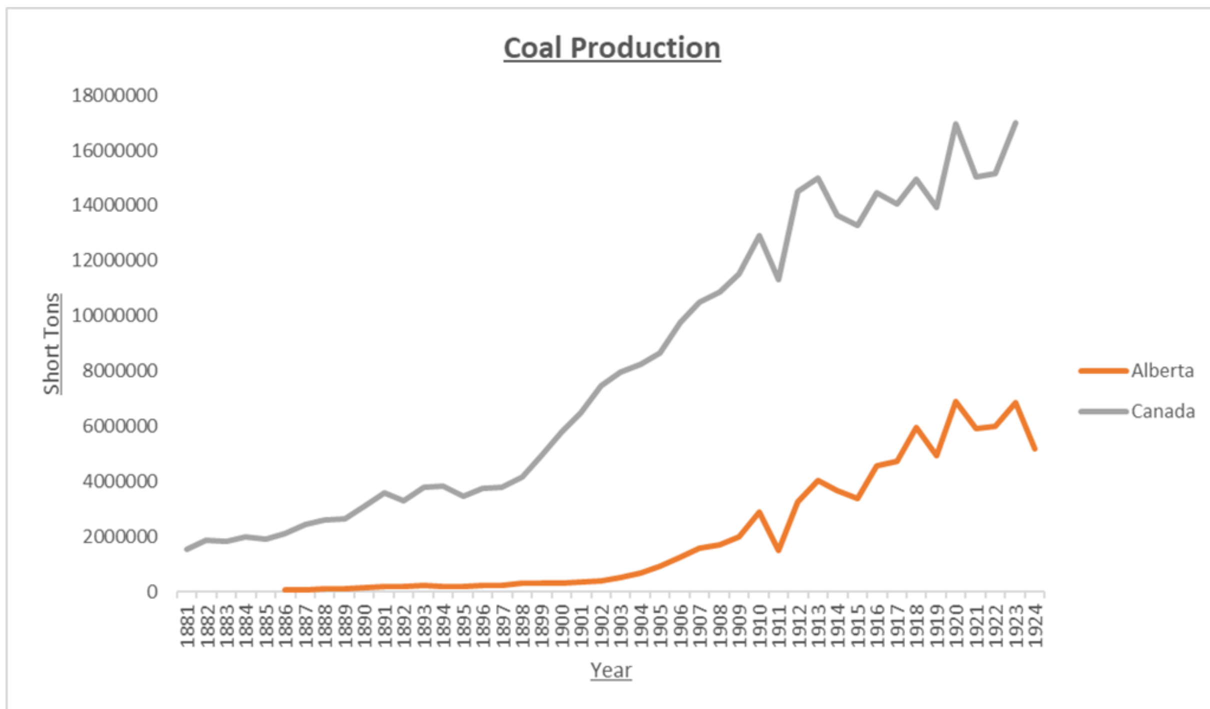

Figure 3. Yearly coal production statistics for Canada and Alberta (Canada. Dominion Bureau of Statistics. Mining, Metallurgical and Chemical Branch., 1923).

Landscape Change.

Coal mines in Alberta from 1874 to 1919 were small underground operations. While modern open-pit coal mining operations in Alberta raise concerns of selenium and arsenic in nearby waterways, there is no evidence that the increase in selenium and arsenic are related to small underground mining from early industrial practices. However, small underground coal mines did alter the landscapes they operated in. Early mining activity in Alberta is known to

cause surface subsidence (Sladen & Joshi, 1988; Yang et al., 2022). Surface subsidence is when the surface of the land has downward vertical movement due to subsurface movement by natural processes or human activity. Thus, the removal of coal from the subsurface in Alberta's mines has caused surface subsidence (Sladen & Joshi, 1988). Surface subsidence caused by coal mining increases the likelihood of landslides (Yang et al., 2022). It also has important implications for future development of these landscapes as there are abandoned mine shafts throughout the province (Sladen & Joshi, 1988).

While underground mines have a lasting impact on the subsurface, surface mines change landscapes above ground. Surface mining project drastically change the appearance of the landscape as all changes made are visible above ground. The potential ecological costs of mining include loss of vegetation (including decreased forest cover), habitat fragmentation, changes in topography, alteration of soil, carbon sequestration potential and biodiversity (Cristescu et al., 2016)

Water Pollution.

Underground mining operations had negligible impact on nearby waterways but surface mining activity in Alberta creates waste materials that are generally deposited on the surface in tailings piles, ponds, landfills and dumps (Wayland & Crosley, 2006). There is concern that surface mining can mobilize trace elements into aquatic ecosystems in much larger quantities than would naturally occur (Wayland & Crosley, 2006). This increase in trace elements has been connected to an increase in deformities in trout fry in streams adjacent to mining activity (Holm et al., 2005; Miller et al., 2013; Wayland et al., 2007; Wayland & Crosley, 2006). Additionally, aquatic insects and birds in coal mine affected ecosystems showed high levels of trace elements as well (Wayland et al., 2007; Wayland & Crosley, 2006).

Human Capital

Health.

Both surface and subsurface coal mining impacts the respiratory health of the miners (Derickson, 1991; Laney et al., 2012). The particles that coal miners inhale during work can lead to coal worker pneumoconiosis, one of the oldest occupational lung diseases (Moitra et al., 2015). Coal worker pneumoconiosis was recognized as early as 1822 and was referred to as miner's asthma (Moitra et al., 2015). Miners are also at an increased risk of chronic obstructive

pulmonary disease and lung cancer (Hendryx, 2015). These occupational diseases are connected to the inhalation of coal and rock dust and other mining related chemicals (Hendryx, 2015; Laney et al., 2012). These health risks have not changed much over the years. However, as the industry advanced the use of personal protective equipment became more common in order to minimize the risk of these diseases (Lama & Bodziony, 1998).

Education.

Education was incredibly important to the miners and their families. Throughout Alberta's Coal Commission of 1919 members of the company towns would advocate for quality education for the children of the coal miners (Bercuson, 1978). Another feature of education in early coal mining communities was low school attendance. Poor school attendance was common in all rural and isolated communities in the province because of the role children played in the labour force (Ell, 2005; McIntosh, 2000; Rollings-Magnusson, 2009). Even though education for children in mining communities was a cause that Alberta's coal miners often advocated for, many children ended up not attending school and instead contributed to the daily operations of the mines (Bercuson, 1978). The main purpose of schooling in the province at this time was to teach immigrants English (Ell, 2005). This was a main factor of education in coal mining communities as they were largely populated by immigrants.

In 1959 the Cameron Report, a Royal Commission on Education, concluded that the day of unskilled and uneducated workers was gone (Matsumoto, 2002). Following this, there was a shift in the province that supported the idea that formally educated workers would be more productive (Matsumoto, 2002). This led to greater concern surrounding school drop out rates and the "waste of human potential" (Matsumoto, 2002). Education in the province continued to improve and reform based on standards set by the international community until 1994, when Alberta cut social spending by 21 percent (Matsumoto, 2002). Following this decision, the government of Alberta claimed that basic education was adequately funded; however, statistical evidence proved otherwise ("Education Funding," 1998). Further, Statistics Canada reported Alberta as having one of the highest high school drop-out rates in the country in 2005 (Bowlby, 2005; Parlee, 2015). The drop out-rates were much higher in rural areas than urban spaces and high school drop-outs were more likely to be working than those with a highschool diploma in other provinces (Bowlby, 2005).

Employment.

Right from the beginning of industry in Alberta, resource extraction has been a large draw because of the abundance of jobs in coal mining. By 1920, the majority of Alberta's population were immigrants, most commonly referred to as foreigners at the time (Bercuson, 1977, 1978). There was a large presence of European immigrants in the Alberta coal industry. With advertisements of the potential for work and a better life in Western Canada, many young men in Europe sought to escape economic hardship by relocating to Alberta (Bercuson, 1977, 1978; Harney & Troper, 1975; Nordegg, 1971). This major increase in the population of Western Canada and company towns allowed for a sense of community to grow rapidly.

The number of jobs in the coal industry remained relatively consistent from 1920 to the late 1950s with total average employees ranging from 6,000 to 10,000 per year with many fluctuations (Government of Canada, 1922, 1951). However, in the 1960s the number of coal mining employees decreased significantly with less than 2,000 total on average each year (Government of Canada, 1951, 1972). The number of jobs in the coal industry in Alberta never recovered back to the pre 1950s scale.

Labour and Workplace Conditions.

Coal mining was dangerous and high-risk work. There was a high risk for workplace accidents for coal miners, and tragedy for coal mining communities. The Hillcrest mine disaster is just one example of a mining disaster in the early history of coal mining in Alberta. Landslides and explosions were expected aspect of mining (Bercuson, 1977; Hanon, 2013; Seager, 1985). From 1907 to 1916 the average fatalities per million tons of coal mined in Alberta was 12.15 (Bercuson, 1977). Compared to the average of 4.99 fatalities during the same period in the United States, Alberta's coal industry provided incredibly dangerous work (Bercuson, 1977). After the widespread adoption of larger unions such as the One Big Union after 1919, Alberta's mining workforce was well known for advocating for their rights and achieving their goals (Bercuson, 1974; den Otter, 1975).

Social Capital

Community.

Beginning in the mid-1890's, there was an acceleration in the settlement of Western Canada which generated a rapid expansion in the coal industry (den Otter, 1975). The increase of

settlers to the region required more domestic fuel and more fuel to be supplied to the railways which were experiencing an increase in rail traffic (den Otter, 1975). Before this the coal mines in Alberta were sporadically producing coal. For example, some mines were only busily employed for a couple of months in the winter, and in the summer the mines were only operated a couple days a week (den Otter, 1975). In 1891 there were roughly 3, 000 miners employed in Western Canada, with the great majority working in British Columbia (Seager, 1985). However, by 1910, coal production in Alberta had increased immensely. For example, in 1910 the colliers in the Crowsnest Pass alone were producing 3, 036, 000 tons of coal and employed nearly 6, 000 miners (den Otter, 1975).

In Alberta, the company towns were generally established in geographically isolated areas (Bercuson, 1977, 1978). This was a result of the location of coal seams being removed from larger urban settings and the need for the labour force to access the mine in order to work (Bercuson, 1977; Crawford, 1991). This physical isolation presented a series of limitations for miners and their families. Miners in isolated mining communities had very few options once they entered the industry. Skilled miners were tied to their occupations and often to the specific company they worked for (Bercuson, 1977). They had very limited options outside of the coal industry (Bercuson, 1977). Often skilled miners would choose to remain in company towns. Interestingly, unskilled miners, even the ones who were employed full time at the mines, had more opportunities outside of the industry than their skilled counterparts (Bercuson, 1977). Full-time miners who were not on contract (most often unskilled) had the option to become farmhands, railway construction workers, or escape to the cities (Bercuson, 1977). However, none of those options were very promising. Agricultural labour in Alberta was grueling work that was twenty-four hours a day work at low wages (Bercuson, 1977). Railway construction work was not much better with its workers considered "just above slaves in the general scheme of things" (Bercuson, 1977, p. 170). If an unskilled miner was hoping for a better life outside of a company town that left relocating to the city as the final option.

In theory, the cities would offer the best chance for a miner to improve their quality of life. There was the potential for freedom, plenty of recreation activities, and companionship during this period (Bercuson, 1977; Klassen, 1975a). However, for an unskilled worker the urban centers of Western Canada would not bring much prosperity. The city presented good

opportunities for advancement for the skilled workers (Bercuson, 1977; Klassen, 1975).Unfortunately, coal miners, both skilled and unskilled, did not likely possess the expertise to be considered skilled workers by city standards. Skilled workers had the capabilities of starting their own businesses, perhaps printing shops or contracting firms, or they might go into politics (Bercuson, 1977). For the unskilled labourer, potential jobs may have included ditchdigger, waiter, bartender, or cook (Klassen, 1975). For the unemployed, every western city had an area described as being "across the tracks" (Bercuson, 1977, p. 171). In Calgary this was the tent towns in Hillhurst or near the Centre Street Bridge (Bercuson, 1977; Klassen, 1975). In

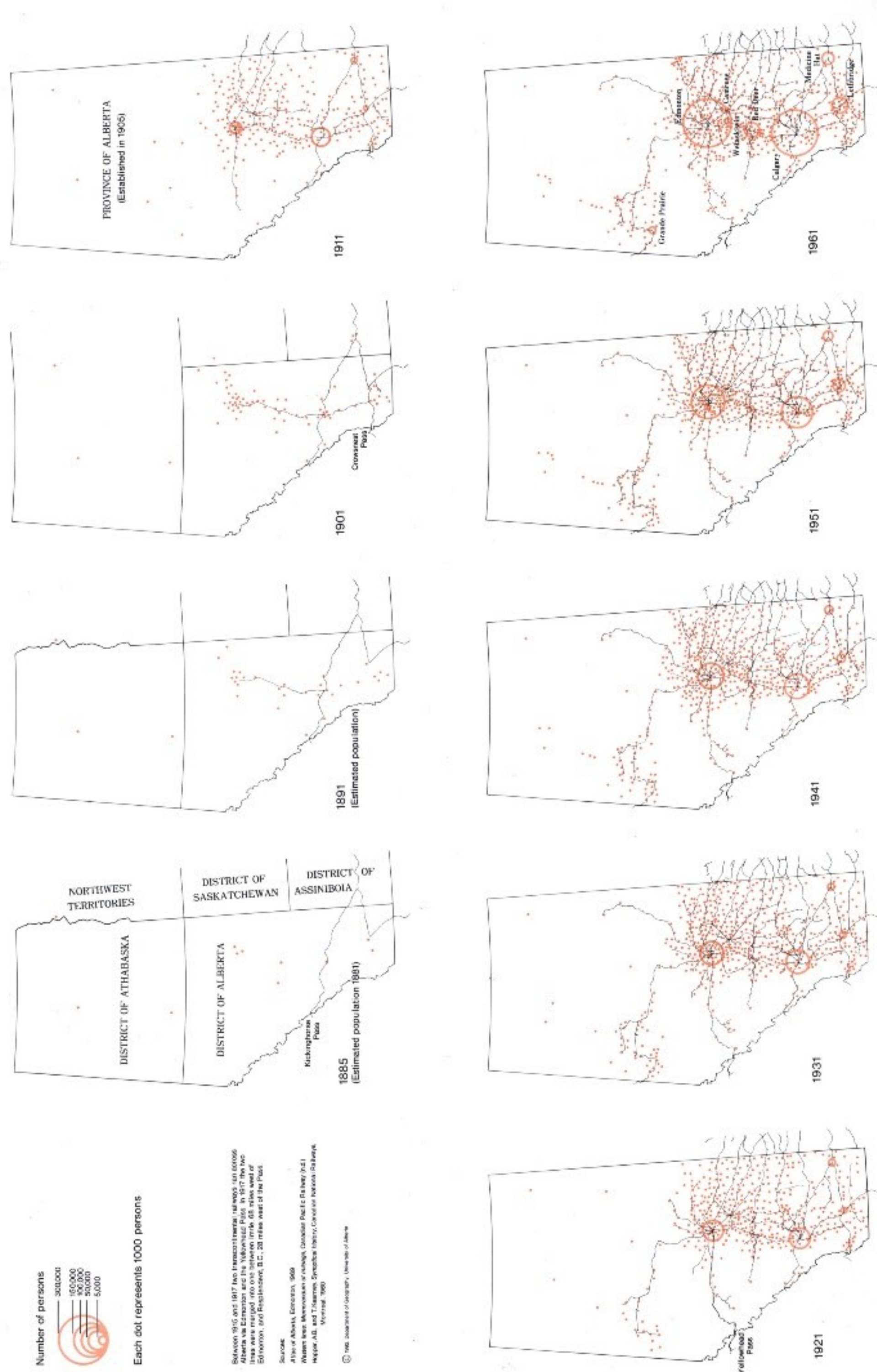

Figure 4. Visual depiction of population growth related to railways over time in Alberta (Department of Geography, University of Alberta, 1992b).

Edmonton, there were frame shacks set up along the Grand Trunk Prairie main line, near Calder Yards, or east of Mill Creek (Bercuson, 1977).

These hardships mixed with geographic isolation provided conditions where a sense of community had to be generated. The paternalistic and isolated nature of company towns meant that miners had to rely on one another in all aspects of their lives. For safety in the mines they needed to know that they could trust their coworkers and beyond work, there needed to be a level of confidence and trust maintained among miners in order to subvert the companies. For example, union halls were often the only space that miners could frequent that was not owned by the company (Bercuson, 1977). These halls were maintained by the miners and they all trusted that anything said in the halls would not reach the ears of the company (Bercuson, 1977). In many ways a close sense of community in these towns was necessary to survive the adverse conditions.

Regional.

At the beginning of the coal industry was a saturation of mines in the province all competing. As a result, there was little regional cohesion until the introduction of large scale unions such as the UMWA and the OBU. These unions brought mines across the province together through communications and strikes (Bercuson, 1974; Devine, 2009). Union efforts created a unified front across the province. Mine workers in Alberta made a strong name for themselves from their union activities (Piper & Green, 2017). Today there are significantly less operational coal mines than the beginning of the industry. Even with fewer mines, the regional sense of community connected to coal mining remains strong. Whether it's in support or against coal mining, province wide communities have responded to the rescinding and reinstatement of the 1976 Coal Policy (CBC News, 2022).

National and Global.

National and global attention has turned to coal mining in Alberta since the 1970s. The 1976 Coal Policy was an important policy that worked towards protecting biodiversity and promoting ecosystem health. Before this switch the coal industry in Alberta was not a focus of the global community. Recently, Alberta's coal mining industry has received increased attention nationally and globally as the province explores a future of coal mining. Adding to national and global interest surrounding the decision to rescind the 1976 Coal Policy, was the complexities

surrounding Indigenous consultation around coal development. Coal development in Alberta means that there would be a negative effect on traditional land use and Indigenous Peoples' ability to exercise their rights (Parlee, 2015; Winter et al., 2021). While coal development would have negative impacts in this way, the position of Indigenous groups on this situation was very complex. The proposed Grassy Mountain project highlighted that Indigenous communities faced real challenges when coming to a decision regarding the project (Winter et al., 2021). An industrial presence like the Grassy Mountain project on traditional lands had the potential for economic benefits for Indigenous communities. For example, employment related to the project presented as a large benefit for some communities (Winter et al., 2021).

Another complication regarding Indigenous consultation and coal development is that several First Nations communities have written to the province demanding better Indigenous consultation (Weber, 2021a, 2021b). Carol Wildcat, the consultation co-ordinator for the Ermineskin First Nation stated, "Ermineskin was not even advised that the decision (to rescind the policy) was to be made or that it had been made… Ermineskin became aware through media reports" (Weber, 2021a). Efforts to include First Nations communities in current coal mining ventures has been described as "exploiting reconciliation" (Meng, 2022). A large draw for future coal mining operations is the promise of the jobs that will be generated and the economic benefits to the local community from an increase in traffic through the town (Meng, 2022). However, the local communities will suffer the environmental and health effects connected to coal mining, but they will not likely receive the financial rewards they anticipate (Meng, 2022). Most of the workers who will brought in to the coal mining project will take their earnings back to their home communities and not the local community (Meng, 2022). Following on this outflow of capital from the coal mining community to other areas, many of the companies interested in starting new mining ventures in Alberta are not Canadian owned (Reuters, 2020). The proposed Grassy Mountain coal project was back by an Australian company (Reuters, 2020).

Political Capital

Rights and Representation.

Miners in Alberta's mining communities formed their own local unions before any larger organized unions spread through the province. Whatever the company did not provide, the union

would provide (Bercuson, 1977). One thing that was missing from company towns was a place where the coal miners could go to escape the company. So the unions built their own halls which provided the miners a place to interact away from company ears (Bercuson, 1977). While these unions were not widespread, like the unions that would come later on (i.e. One Big Union), they were still powerful. Strikes were common in coal mining communities during this period (Bercuson, 1974, 1977; Seager, 1985; Van Tighem et al., 2007). Since company towns were a new concept in Western Canada, companies had free reign to determine the costs of living for their towns and the wages of their employees (Bercuson, 1977, 1978; Crawford, 1991; Nordegg, 1971; Seager, 1985). There was no standard wage that they were required to pay their miners and most companies required the miners to pay rent to live in their company town (Bercuson, 1977, 1978; Seager, 1985). Disputes over wages and living costs were often the cause of a strike in coal mining communities in Alberta (Bercuson, 1977; Seager, 1985; Van Tighem et al., 2007). Leonard van Tighem, a Catholic priest residing in Lethbridge during 1897, makes a comment about a strike occurring in August of 1897: “Our mines are closed since a few days, the strike is on, the miners ask for an increase of wages and many grievances must be removed before they will return to their labours” (Van Tighem et al., 2007, p. 120). This particular strike lasted over the entire month of August (Van Tighem et al., 2007). Strikes of this nature were commonplace at the time and Van Tighem mentions several other strikes in his diaries (Van Tighem et al., 2007).

Larger unions, such as the United Mine Workers of America (UMWA), were beginning to spread through Alberta in the 1900s. The United Mine Workers of America began in the United States in 1890 (United Mine Workers of America, n.d.). The UMWA quickly spread to Canadian mines in Western Canada (Devine, 2009; Seager, 1985). The UMWA provided a means for miners to communicate with other mines. This allowed miners to regain control over their wages, living conditions, working conditions, health care, and education (Derickson, 1992; Hanon, 2013; Seager, 1985). The presence of an organized union during this time period was the beginning of the labour militance that is often associated with Alberta’s coal miners following 1920 (Piper & Green, 2017).

Today coal mining communities have better protections and rights than they did previously. Advances to human rights naturally improved conditions for miners in the workplace

and in their communities. Not only did advances in human rights benefit coal mining communities but it also benefited Indigenous communities who were excluded from coal mining histories. In 2007, the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) becomes part of international law (The Alberta Teacher's Association, 2018). In 2009 the National Truth and Reconciliation Commission (NTRC) was initiated and in 2015 the NRTC released its final report containing 94 calls to action. The NTRC emphasized the importance of consultation in many areas. Understanding the importance and need for Traditional Knowledge in land and resource management began to gain traction during this time. The public understanding of the harm committed against Indigenous Peoples by the government and settlers increased drastically. While the coal industry from 1976 to 2019 largely did not involve Indigenous communities in decision making or consultation, public perception around the involvement of Indigenous communities changed significantly. Recently there has been a recognition that Traditional Knowledge and Indigenous consultation is critical approaching any extractive project (Meng, 2022).

Mining Regulations.

In 1976, the Government of Alberta implemented a coal policy that stated that "no coal development will be permitted to proceed unless in its overall economic and social impact it is clearly beneficial to Alberta" (Government of Alberta, 1976; Winter et al., 2021). This coal policy took note of environmental degradation related to coal mining as well as the social impacts of the industry on coal mining communities. The policy provided four categories of land related to coal mining exploration with Category 1 land being off limits for coal exploration, Category 2 had strict limitations for coal exploration with no surface mining, Category 3 was land that would have restricted development but would allow surface mining, and Category 4 had the least set of restrictions and would continue to operate under normal approval procedures.

Coal mines that were operating when the coal policy was instated had the opportunity to either sell the land back to the government, continue until the lease expiration, or continue with the option to renew depending on the category of the land. The land categories were largely based off of the environmental sensitivity of the land. For example, Category 1 land had a very high environmental sensitivity. The coal policy outlined that in order to evaluate the benefit of

coal development to Alberta there needs to be a cost-benefit analysis, social impact analysis, and environmental impact analysis (Government of Alberta, 1976; Winter et al., 2021)

In May of 2020, the Government of Alberta revoked its 1976 Coal Policy (Winter et al., 2021). This decision shocked many in the province and nationally. Not surprisingly, the decision to revoke the policy was very controversial (Fletcher & Omstead, 2020; Winter et al., 2021). The government argued that the 1976 policy, including the land-use restrictions, was outdated (Winter et al., 2021). The government then outlined the intention to modernize the regulatory framework and land-use planning for metallurgical coal (Winter et al., 2021). While the government continued the restrictions on former Category 1 lands, all other restrictions were lifted (Winter et al., 2021). After a coal lease sale was held in December of 2020, the Government of Alberta announced in January of 2021 that Lease sales for Category 2 lands was suspended and the leases from December 2020 auction would be cancelled (Winter et al., 2021). Then in February 2021, the provincial government reinstated the 1976 Coal Policy (Winter et al., 2021). However, four advanced coal projects approved prior to the rescinding of the policy were allowed to proceed (Dryden, 2022). These projects are the Grassy Mountain coal project, Tent Mountain, the Vista coal mine, and Mine 14 project from Summit Coal, with the Grassy Mountain application being denied in June 2021 (Dryden, 2022; Winter et al., 2021). Also in June 2021, the Government of Canada announces that it considers that new thermal coal mines or the expansion of existing thermal coal mines will likely have unacceptable environmental effects (Winter et al., 2021).

Agreements, Trade, and Environment.

In recent years, the global community has taken action to adapt and mitigate a climate crisis. Notably, the Paris Agreement is recognized as a moment where the global community came together to commit to protect environments and reduce greenhouse gas emissions. Canada's commitment to the Paris Agreement garnered international interest since Canada infamously pulled out of the Kyoto Protocol in 2011 (Hrvatin, 2016). When the Canadian Parliament ratified the Kyoto Protocol in 2002 Canada committed to reducing its greenhouse gas emissions by 6 per cent from 1990 levels between 2008 and 2012 (Hrvatin, 2016). Instead national emissions increased by over 30 per cent (Hrvatin, 2016). Moving forward to 2015 newly elected Prime Minister Justin Trudeau signed the Paris Agreement and committed to the goals of

limiting global temperature rises to below two degrees Celsius, helping poorer nations combat climate change, and striving for a carbon-free world before 2100 (Hrvatin, 2016).

One of the key initiatives following Canada's signing of the Paris Agreement was to move away from coal (Government of Canada, 2017b). In December 2018, Canada announced regulations to phase-out traditional coal-fired electricity by 2030 (Government of Canada, 2017b). This announcement was supported by the Task Force on Just Transition for Canadian Coal Power Workers and Communities (Government of Canada, 2017b). Beyond this commitment the Prime Minister announced in 2021 that Canada was working towards ending exports of thermal coal by no later than 2030 (Government of Canada, 2021). This announcement included a commitment from the government to place investments of more than $185 million to support coal workers and their communities through the transition away from coal towards cleaner energy as well as $1 billion for the Climate Investment Funds Accelerated Coal Transition Investment Program (Government of Canada, 2021).

Ending exports of thermal coal by 2030 is no small feat as Canadian ports between 2018 and 2020 exported between 11 and 13 millions tonnes of thermal coal (Friedman, 2021). Most of Canada's coal exports go to Asia with 25 percent going to South Korea, 23 per cent to Japan, and 14 per cent to India in 2019 (Government of Canada, 2017a). In 2019 Canada ranked the 7th highest exporter of coal in the world (Government of Canada, 2017a). Further, Alberta produces nearly all of Canadian thermal coal exports (Friedman, 2021).

Discussion

As demonstrated in Figure 5 tracking community capitals over time is not simplistic. Coal mining history in Alberta is complex. Broadly from 1874 to 2022 human, social, and political capital have increased significantly in Alberta's coal mining communities. When considering the limitations of company towns (i.e. geographic isolation, poor healthcare, education and workplace conditions, and limited mining regulations and rights and representation) coal mining communities from 1874 to 1919 demonstrated incredible capacity to adapt to harsh conditions. Today coal mining communities look very different. They are no longer characterized by the harsh conditions company towns were. Further the industry as a whole has changed drastically. The large network of underground mines has been replaced with

		1874-1919	1920-1945	1945-1975	1976-2019	2020-2022	Explanation
Financial Capital	Mine Infrastructure						There was a gradual increase of surface mines from 1920 to 1976. With this change was in increase in mining infrastructure due to mechanization. Moving into the modern day context there are fewer mines than before due to the 1976 Coal Policy with the exception of proposed projects as a result of the policy being rescinded in 2020.
	Regional Infrastructure						Investment in regional infrastructure was significant in the 1874-1919 time period (railways) and continued into the 1920-1975 time period.
	Community Infrastructure						Overtime community infrastructure has strengthed and improved. Housing and access to education are main components of community infrastructure.
Natural Capital	Coal Production						Coal production was necessary from 1874-1919 and grew rapidly. Moving into the 1920s coal production continued to grow. After the discovery of oil in 1947 coal production decreased significantly. From 1975 to 2020 coal production increased after the seitch to surface mining.
	Landscape Change						Includes abandoned, closed mines that have not been remediated, and surface subsidence from sub-surface mines.
	Water Pollution						Water pollution is largely connected to surface mining ventures.
Human Capital	Health						Health and wellbeing of the workforce increased over time but the same health risks still impact coal miners.
	Education						Emphasis on the importance of education increased with global attention to the issue however, recently there have been divestment from education in Alberta.
	Employment						The beginning of the coal industry through to the discovery of oil marked a time in Alberta's history where coal was critical for both domestic and regional energy. Underground mines during this time required much more man power than surface mines. Surface mining overpowered small underground coal mines in the 1960s and still represent the majority of coal mining in the province.
	Labour/Workplace Conditions						Overtime safety standards for coal mining increased due to union efforts and workplace safety standards nationally and internationally.
Social Capital	Community						Coal mining communities from 1874 to 1919 were characterized by a strong sense of community. As the industry advanced this sense of community was less relevant to the character of these communities.
	Regional						At the beginning of industry in Alberta communities were isolated as union activity advanced communities were more connected and recently technology and communication have advanced regional level of communication.
	National/Global						More recently the global community has recognized that coal is a major polluter and there are more global social movements against coal production and use. Initially communities were isolated with no connection to larger global communities.
Political Capital	Rights and Representation						Rights and representation increased for coal mining communities with the advance of large scale unions (UMWA & OBU). Additionally, advances to human rights have naturally improved rights and representation connected to coal mining communities. Further, UNDRIP and NRTC increased the importance of Traditional Knowledge and Indigenous consultation in coal mining projects.
	Mining Regulations						Mining regulations in the province were weak until the 1976 Coal Policy. This policy significantly limited coal mining projects. When the government rescinded the policy from 2020-2022 many of the restrictions were lifted but the restrictions on Category 1 lands remained the same.
	International Agreements, Trade, and Environment						When Canada signed on to the Paris Agreement the country took on the responsibility of limiting emissions. Part of this plan is to phase out traditional coal-fired energy by 2030. Beyond this, in 2021 the Prime Minister announced that Canada is working towards ending all exports of thermal coal by 2030.

Figure 5. Overview of community capitals in coal mining communities from 1874 to 2022.

fewer surface mines. The differences we see in coal mining from 1874 to 2022 are huge. So why is it necessary to trace community capitals back to the beginning of history?

An important piece of this paper is that coal mining communities in Alberta are traced from their beginning through to the modern context of coal mining in Alberta. The timescale of this paper is critical for several reasons. To begin, this paper draws heavily from the historical context in order to contribute meaningfully to the literature surrounding resource dependent communities and coal mining in Alberta. Coal mining communities from 1874 to 1919 are the first resource dependent communities in Alberta. Additionally, the early history of coal mining in Alberta is sometimes overlooked because most of the company towns are no longer operational and closed before the switch to surface mining in the province.

Further, studying resource dependent communities over an extended period of time allows us to assess their capacity to adapt and be resilient in the face of changing conditions. The community capitals frameworks expands on that by highlighting several assets in coal mining communities that contribute to the adaptation and resilience (or lack thereof) of these communities over time. Examining the long-term trajectory of resource dependent communities can inform future plans for natural resource development.

The case study communities in this paper served as examples of resource dependent towns in Alberta that represented a spectrum of different natural, social, human, and financial capitals in coal mining towns. They were not unique examples, in fact the stories of all three towns mirror countless other stories of other coal mining towns in the late 19th century and early 20th century. The closure of these mines is also representative of the coal industry as a whole in the province. The mine closures in these communities were significant. For resource dependent communities, especially company towns, changes to industry impact every aspect of the community. Even though the history of coal mining in Alberta demonstrates stories of resilience and coming together to respond to natural and economic challenges, the case studies provide insight of what happens to resource dependent towns when the function of the town no longer revolves around resource development. It is not surprising the mines in Hillcrest, Nordegg, and Rosedale did not survive the changes in the coal industry. The towns were built and designed to revolve around subsurface mining activity. When the switch to surface mining occurred the company towns did not have the assets to change with the industry.

The capitals framework helps to identify different assets that were present in the early coal mining communities in Alberta. Overwhelmingly, the assets found in these communities were weak. Everything from lack of schoolhouses to market restrictions proved that company towns in Alberta from 1874 to 1919 were in a precarious situation. The only remarkable feature of these company towns was the unions that were formed to protect miners and their families. However, those unions were only necessary because of the nature of company towns. One can argue that the social and human capitals in company towns are not meant to be strong. The function of a company town is to support industry and there is little to no emphasis placed on supporting social and human capital the emphasis is placed on financial and natural capitals. However, in the case of company towns in Alberta, financial capital was negatively impacted by market restrictions. Considering that Hillcrest, Nordegg, and Rosedale did not survive as mining towns we are left to wonder about the viability of resource dependent communities. Perhaps resource dependent communities are not meant to be adaptive and resilient communities, especially when they depend on finite resources such as coal.

Today coal mining communities have stronger social structures available to them. For example, they have access to education, healthcare, and improved workplace safety. However, as Alberta continues to reinvest in coal, inequities persist in who benefits and who bears the costs of coal mining. The perception that coal mining can benefit communities is fuelling this recent push for new mining activities. However, multinational investments into the industry, limited potential for employment and economic diversification, coupled with environmental risks mean that there is little community benefit. These adverse considerations are incredibly similar to the context of coal mining in the province from 1874 to 1919. International companies had ownership of the mines at both Hillcrest and Nordegg, meaning that the earnings of the company outflowed from the communities. Moreover, company towns were built to revolve around one resource and as such economic diversification was met with many challenges and is likely a major contributor as to why Nordegg was unable to continue as a community without the coal mine. Coal miners themselves faced barriers to employment as there were limited opportunities for them outside of the coal industry. Therefore, the same barriers that impacted the sustainability of coal mining communities at the beginning of the industry still impact current and future coal mining ventures.

Conclusion

In conclusion, coal mining in Alberta has a rich history that spans back to 1874 and has gone through many different stages. The decision by the government of Alberta to rescind the 1976 Coal Policy without public consultation in 2020 has sparked controversary and uncertainty regarding the future of coal mining in the province. Conflicting views on potential coal mining projects are fuelled by environmental concerns and economic hopes. As one resident in the Crowsnest Pass admitted "he wants both: the security of industry and an untouched ecosystem" (Zeleny, 2022). This paper uses findings from coal mining history in Alberta to analyze the extent that communities might benefit from future mining ventures. Coal mining in Alberta has previously had complex social, economic, and environmental impacts on communities such as Hillcrest, Nordegg, and Rosedale. While coal mining has provided economic prosperity for some, it has also led to significant hardships for others. As Alberta considers the future of coal mining, factors such as environmental and social risks, alignment with climate change commitments, and the sustainability of the industry are at the forefront of public debates and decision-making.

This paper traces coal mining communities in Alberta from 1874 to 2022 with the aim to contribute to the literature on resource dependent communities. Following coal mining communities through different stages of the coal industry reveals the precarious nature of resource dependent communities. An exploration of coal mining communities, with particular attention to Hillcrest, Nordegg, and Rosedale, from 1874 to 1919 provided context that was necessary to unpack the financial, natural, human, social, and political capitals of company towns in Alberta. These histories are then further contextualized with data and narratives from other periods of coal mining activity in the province from 1920 to 2022. Tracing company towns over time identified similarities between the early history of industry in the province and the current context. Even though the context of coal mining in Alberta has changed drastically over time, this paper identified that multinational investments into the industry, limited potential for employment and economic diversification, along with environmental risks are all adverse impacts connected to industry in Alberta historically and presently. By examining the capacity and adaptation of coal mining communities through time, the paper aims to identify the extent

that communities have previously benefited and their potential for benefiting from coal mining in the future.

CHAPTER 3.0: Gender and Indigenous Erasure in Alberta's Early Coal History

Introduction

The early history of extractive industries in Alberta focuses on the coal industry. Coal production in Alberta from 1874 to 1919 was the beginning of industrial resource extraction in the province (den Otter, 1975; Seager, 1985). At that time coal was a huge contributing force in the provincial economy and it also had influence over the social systems in Alberta's communities. Coal mining communities in the province operated under social structures consistent with the resource curse and addictive economies theories, meaning that the social systems in these communities completely revolved around industry.

The social dimensions of resource extraction and mining is a well-developed literature in both environmental sociology, political science, geography, and other disciplines (Freudenburg, 1992; Gaventa, 1982; Parlee, 2015; Rodrigues et al., 2022). Within this literature a significant body of work has been devoted to the gendered impacts of mining including the unique impacts on and contributions of women (Bradshaw et al., 2017; Lahiri-Dutt, 2012; Laite, 2009; Macdonald, 2018; O'Shaughnessy & Krogman, 2011). Indigenous women are uniquely featured in a growing body of literature which particularly concerned with moving beyond limiting themes of sex work and violence (Adamson, 2017; Arvin et al., 2013; Bourgeois, 2018; Sinclair, 2021). Within this research landscape, coal mining in Canada and the United States has been a major area of study and interest (Bourgeois, 2018; National Inquiry into Missing and Murdered Indigenous Women and Girls, 2019; O'Shaughnessy & Krogman, 2011); historic coal mining, particularly in the Appalachia region has been well illuminated in academic literature as well as in popular culture (Gaventa, 1982). The economic histories of Alberta's coal mining communities have been well documented (Bercuson, 1977; den Otter, 1975; Piper & Green, 2017; Seager, 1985). However, women, specifically Indigenous women, are poorly represented in the dominant social narratives, a bias which mirrors a broader pattern of gender and Indigenous cultural erasure associated with land and resource management in Canada and elsewhere. This gap around Indigenous women's experience of coal mining is particularly pronounced in Western Canada including Alberta.

Previous literature exploring the complex roles of women in mining communities examines the pattern of sorting women into the categories of "wives" or "whores" (Bradshaw et

al., 2017; Lahiri-Dutt, 2012; Sweetman & Ezpeleta, 2017). This dichotomy is upheld in social narratives from Alberta's early coal mining communities where women are exclusively mentioned in relation to these roles. Indigenous women who interacted with coal mining communities during this period were also forced into this binary. Indigenous women occupied an intersectional space in the history of resource dependent communities because they are part of two groups excluded from economic histories (Indigenous communities and women). Further, by nature of the wives and whores binary enforced in these resource-dependent communities, Indigenous women were sorted into the category of whores by default due to the position they held in society related to their Indigeneity.

The understanding that previous scholarship on coal mining in Alberta may hold biases that work to erase Indigenous people, especially women, from the historical landscape has informed this research. The purpose of this literature review is to bring the stories of women (particularly Indigenous women) and Indigenous communities to the forefront when considering coal mining in Alberta. The results of this paper explore where women, Indigenous women, and Indigenous communities have been selectively included in the historical narratives. The results also emphasize the unique positionality of Indigenous women as they occupy the intersection between two marginalized groups. Guided by critical race theory, feminist research methodologies, especially those that focus on Indigenous women, and settler colonial theory, this paper offers a critical discussion about the gendered dimensions of historic coal mining in Alberta. The results of this analysis reveal hidden impacts of resource dependency. Specifically, this paper argues that re-examining the existing literature and historical narratives surrounding resource dependent communities is necessary to understand the formal and informal ways women and Indigenous communities participated in coal mining economies from 1874 to 1919, and also how Indigenous women were actively erased from the histories of resource dependent communities.

Setting

The beginning of the coal industry in Alberta was in 1874 (Winter et al., 2021). By 1890 the federal government had taken note of the vast potential for coal mining in Alberta, then known as the provisional district of the Northwest Territories, and had advanced efforts for the development of the coal industry in tandem with building the transcontinental railway (den Otter,

1973, 1975). Not only was the coal industry essential for the expansion of the transcontinental railway, but it provided inexpensive fuel for the settlers of Western Canada as well as employment opportunities (den Otter, 1973). From 1890 to 1920 the coal industry was a critical component of settlement in Western Canada.

During this period, coal miners in Alberta began to form union efforts and laid the groundwork for the radical movements that Alberta's coal miners were known later on (Bercuson, 1974; Piper & Green, 2017). These coal mining communities were heavily industry focused with many of the towns being considered company towns (Bercuson, 1974; Seager, 1985). The coal mining and railway companies had tremendous control over coal mining communities. In many of the coal mining communities in Alberta, people were living in poor housing conditions with limited access to healthcare and education (Bercuson, 1978; Jones, 1998; K. D. Smith, 2009). This paper builds upon the existing body of literature surrounding the social narratives in Alberta's early coal mining communities.

Gender and Resource Dependent Communities

Narratives about industrial frontiers, primarily focus on men of European descent who are working in the industry (Bradbury, 1987; Cronon et al., 1986; Friesen, 1976; Jameson, 2016). The role that women played in frontier communities is often lost in historical records (Bradbury, 1987; Cronon et al., 1986; Jameson, 2016). The narratives tend to center around economic labour histories connected to the workforce, which was almost exclusively men (Bercuson, 1974, 1978; den Otter, 1975; Seager, 1985). Even though the histories surrounding resource extraction are male dominated, women played a critical role in these same histories including Alberta's mining frontier. Scholars such as, Lian Sinclair (2021) and Kuntala Lahiri-Dutt (2012) explore the complexities surrounding gender and resource extraction. This paper was inspired by these works and sets up the gender dynamics of women in the beginning Alberta's coal mining industry. In resource dependent communities women are often constricted to occupying the roles of a "wife" or a "whore", and more recently "worker" (Bradshaw et al., 2017; Sweetman & Ezpeleta, 2017). These roles that women are expected to occupy are consistent with coal mining histories in Alberta where women are mentioned in relation to domestic labour (wives) and sex work (whores). These two groups of women played different roles in the historic economies of mining towns in Alberta from 1874 to 1919.

It is common in resource dependent communities for women to take on unpaid labour in order to support the community functioning while the men are employed by industry (Bradbury, 1987; O'Shaughnessy & Krogman, 2011). Wives of miners provided unpaid domestic labour that allowed mining communities to foster family life (Armitage, 1985). They also provided critical support during labour movements such as union strikes (Bradbury, 1987). Another group of women who were integral to the communities in the mining frontier were whores. Sex workers were active contributors to the community. The red-light districts, brothels, and traveling sex workers serviced the towns in mining communities across the province. The connection between sex work and resource extraction is well documented (Adamson, 2017; Bradshaw et al., 2017; Laite, 2009). These narratives many connections to previous scholarship about gender and extractive industries. Mining communities around the world past and present have much in common with the experiences of the women in coal mining communities in Alberta from 1874 to 1919.

Indigenous Women and Mining

There is very limited literature connecting Indigenous women to the early history of coal mining in Alberta. All accounts that connect Indigenous women to coal mining communities are not focused on coal mining history. The erasure of Indigenous women from historical narratives has been recognized in several different contexts both locally and globally (Arvin et al., 2013; Konishi, 2019; Wolfe, 2006). In order to piece together a version of this history that includes Indigenous women, you must think outside of the box and look into other areas of history. For example, James Gray (1971) published a book that is full of information about how Indigenous women were connected to the mining communities but this book focuses on red light districts and prostitution in mining communities. Another author who provided invaluable insight into how Indigenous women fit into coal mining histories, again indirectly, was Sarah Carter. Carter focuses on the history of marriage and monogamy in her book *The Importance of Being Monogamous* (2008). This paper will go into further detail on these connections however, the important thing to note here is that in order to find this information you must expand your search. There is very little published about how Indigenous women are impacted by coal mining in Alberta, and where there is information on this subject it is often indirect mentions, as illustrated above.

Since the National Inquiry into Missing and Murdered Indigenous Women and Girls (2019), the connections between resource extraction projects and violence against Indigenous women and girls in Canada has become more well known. The literature on connections between extractive industries, beyond coal, in Alberta and the impacts on Indigenous women and girls is full of observations of violence directed towards Indigenous women and girls (Morales, 2019; Perkins, 2017; Ray, 2018). Fort McMurray, in particular, is one community frequently used as an example as it has been ranked in the top five Canadian cities on the crime severity index (Morales, 2019). These reports of violence against Indigenous women connected to extractive industries in Alberta is consistent with international literature on extractive industries (Adamson, 2017; Jenkins, 2014; Lahiri-Dutt, 2012; Laite, 2009; Morales, 2019). Indigenous women and girls globally, report increased vulnerability and less secure when mining projects are introduced near their communities (Morales, 2019). Sexual exploitation and sex work often increases when extractive industry development happens in a community (Laite, 2009; Morales, 2019).

Literature Review

Critical Race Theory

Critical race theory is an impactful theory to explore race as a distinct social formation (Kauanui, 2016). When focusing on Indigenous histories it is necessary to acknowledge that Indigeneity is distinct from race, ethnicity, and nationality as it incorporates elements from all three (Kauanui, 2016). However, critical race theory is considered an instructive theory for articulating an anti-colonial research methodology (Carlson, 2017). As Carlson (2017) explains, critical race theory utilizes research methods that "seek to equalize power, embrace humility, emphasize critical reflexivity" and "attend to subjectivity and emotion" (p. 499). With this in mind, critical race theory was an important methodology for my research with the recognition that it is not a perfect framework for exploring the complexities of Indigeneity.

Feminist Research

Feminist research methodologies as well as those particular to the experience of Indigenous women was particularly relevant to my study (Arvin et al., 2013; O'Shaughnessy & Krogman, 2011). Feminist theorists particularly concerned with the experience of Indigenous women and presence in the historical record of Western Canada include Sarah Carter (1993, 2008) and Robyn Bourgeois (2018). Their works were incredibly impactful for this research.

Both Carter and Bourgeois explore the intersections of being a woman and being Indigenous in a historical context similar to my research. Additionally, feminist theorist that specifically focus on natural resource extraction such as, Kuntala Lahiri-Dutt (2011, 2012), Sara O'Shaughnessy, and Naomi T. Krogman (2011). As O'Shaughnessy and Krogman (2011) explain, feminist theory has only more recently been applied to the environmental social sciences and specifically scholarship on natural resources has largely disregarded gender as an important analytical category. Where gender is considered in this body of literature there is a tendency to restrict women into the categories of wives and "whores" (Bradshaw et al., 2017; Lahiri-Dutt, 2011). Further Indigenous feminist theories such as Eve Tuck, K. Wayne Yang, Maile Arvin, and Angie Morrill (Arvin et al., 2013; Tuck & Yang, 2014) presented theory that is central to this paper.

When writing about alternative perspectives of history it is important to move away from comparing male and female narratives to one another. The work of O'Shaughnessy and Krogman (2011) served as a reminder that the dichotomization of men and women, particularly separating masculine and feminine interests, hides the reality that experiences and interests, regardless of gender, may be shared. Women were present in these coal mining communities, and had shared experiences with the men, even if they are not mentioned in the historical record. This paper aims to reveal these missing narratives but not to erase the current scholarship available. With this in mind, it is important to acknowledge that while this paper uses the categories of wives and whores to analyze social narratives it is with the intention to undermine the power that these labels have had on coal mining histories in Alberta. This binary in no way encompasses the full experience of women in these communities and this research seeks to highlight the limits of the enforcement of these roles in resource-dependent communities.

Indigenous Feminist Research

Another key consideration for this paper inspired by Indigenous feminist research methodologies such as Arvin et al. (2013) is that heteropatriarchy and heteropaternalism go hand in hand with settler colonialism. Arvin et al. (2013) describe heteropatriarchy as "the social systems in which heterosexuality and patriarchy are perceived as normal and natural, and in which other configurations are perceived as abnormal, aberrant, and abhorrent." (p. 13) They go on to give a subsequent definition of heteropaternalism as "the presumption that heteropartriarichal nuclear-domestic arrangements, in which the father is both center and

leader/boss, should serve as the model for social arrangements of the state and its institutions." (p.13) Both heteropatriarchy and heteropaternalism rely on a narrow definition of the male/female binary where men are viewed as competent, strong, and wise whereas women are seen as incompetent, weak, and confused (Arvin et al., 2013). This framework contributes to settler colonial efforts to erase Indigenous communities. Focusing on heteropatriarchy and heteropaternalism as "proper" family structures undermines Indigenous governance structures, families, and ways of life (Arvin et al., 2013).

The primary and secondary material used in this paper presented stories of communities that consisted of predominantly white, young, heterosexual families where the men were the breadwinners with their wives participating in unpaid domestic labour. These stories of settler communities are routed in the heteropatriarichal and heteropaternal frameworks. While this paper acknowledges those narratives, it is important to understand those stories are not representative of all women, especially Indigenous women. Indigenous feminist theory provides a necessary framework for this paper. Previous work done on coal mining settler communities highlights narratives of heteropaternalism and heteropatriarchy as the norm. Indigenous feminist theory provides a framework to name and identify those structures and approach the existing literature with a critical lens.

Settler Colonial Theory

Scholarship that focuses on settler colonial theory reminds us that settler colonialism, including settler histories and settler research, has one aim; to disappear Indigenous people from the land (Arvin et al., 2013; Bacon, 2019; Konishi, 2019; Morgensen, 2011; Wolfe, 2006). The erasure of Indigenous people from settler histories is colonialism (Konishi, 2019; Wolfe, 2006). Influential work on settler colonialism (i.e. works by Patrick Wolfe) argue a need for the binary structure of a Native/settler divide (Konishi, 2019). When considering where Indigenous peoples were excluded from the dominant historic record of coal mining in Alberta it is critical to remember that these exclusions are directly related to settler colonialism. In Canada, the Indian Act provided the settler state control over ancestral lands as well as Indigenous bodies (Pictou, 2020). When searching for stories of Indigenous communities and Indigenous women connected with coal mining histories, it is apparent that the history is very complex. Indigenous people are experts of their own history. This is important to remember when reading this paper. The

primary and secondary sources that this research is drawn from largely exclude Indigenous voices. Stories of Indigenous experience are not limited to settler documents and the historical record. Oral histories and other methods of story telling are valid sources as well (Hunt, 2016).

Eve Tuck, an influential Indigenous theorist, and K. Wayne Yang (2014) write on settler colonialism in qualitative research and how settler scholars use inquiry as invasion to produce settler colonial knowledge for the academy. One way that inquiry becomes invasion is through the need to produce "original research" often times through the experiences of Indigenous people (Tuck & Yang, 2014). Tuck and Yang (2014) present several axioms of social science research that prove that inquiry should not be invasive. The first is that Indigenous communities are often only included in research in order to speak about their pain. Another axiom is that there are some forms of knowledge that the academy does not deserve. In this research, the violence against Indigenous women and girls in connection to coal mining communities is highlighted. These narratives are not the only stories that should be told about Indigenous women in this context. However, the only mention of Indigenous women in the historical narratives was in connection to colonial violence and sex work. While this paper acknowledges these stories it in no way encompasses the full reality of Indigenous experiences in the communities this paper focuses on. Settler colonial theory provides insight when examining the inclusions of Indigenous women solely in connection to sex work. As the literature emphasizes Indigenous women as sex workers it is also actively erasing Indigenous women from the landscape.

Methods

A systematized literature review was carried out in three phases between February and June 2022. An initial literature review was conducted to explore the existing literature surrounding coal mining communities in Alberta from 1874 to 1919 in order to unpack missing perspectives from the historical narratives. Then the second phase of the literature review was carefully examining the literature to determine in what contexts women and Indigenous communities were mentioned. From there it was apparent that Indigenous women, who occupy an intersectional space, were uniquely positioned in coal mining literature in Alberta. The final phase of the literature review was focusing on Indigenous women and the role they played in coal mining communities in Alberta from 1874 to 1919. Recognizing the erasure of Indigenous

peoples from historical narratives, I expanded my search to find additional literature that might help illuminate more about the histories and experiences of Indigenous women in this context.

Results

The results of this chapter highlight key findings on groups that are excluded from the dominant coal historical narratives in Alberta. The four groups highlighted are wives, whores, Indigenous communities, and finally Indigenous women. The results highlight how all four of these groups have been excluded in unique ways from the dominant historic narratives. Using examples from the literature review to highlight where these groups were mentioned in the historical record provides us with the tools needed to understand why its important that these groups were excluded from the dominant records surrounding coal.

Wives

Women living in coal mining communities from 1874 to 1919 in Alberta occupy an important space in the narratives in coal communities, they are categorized as wives in the binary roles women occupy in resource dependent communities. These women participated primarily in domestic work, paid or unpaid (Armitage, 1985; Silverman, 1977). Some of these domestic roles include housewives, domestic servants, cooks, laundress, and shop keepers (Armitage, 1985). It should be noted that women who were employed and paid for their labour would have had very different experiences to the women that engaged in unpaid domestic labour (i.e. mothers and wives of miners) (Armitage, 1985). Susan Armitage (1985) suggests that within historical narratives of the Western Frontier, women should not be considered as solitary individuals "going it alone" but instead should be considered as included in a group. Thus, the women living in coal mining communities engaged in domestic labour are subcategorized into two different groups, those who are paid for their labour and those that are not.

Wives and their children were considered staple members of mining communities at this time. Recalling the Hillcrest mining disaster, after the explosion there was a lot of interest in the wellbeing of the new widows and their families. As a result of this concern, the provincial and federal governments provided financial assistance for the widows and families of Hillcrest (Hanon, 2013). However, there is very limited information available about the women and children living in company towns in Alberta, or Western Canada for that matter. It appears that they are an afterthought in most historical records. Regardless, there is valuable information that

can be inferred from some primary sources from the time. There is substantially more information available regarding women in settler communities, specifically women maintaining homesteads on farms and women living in urban spaces. It is also informative to look to the company towns in Nova Scotia and in the United States that share many similarities with Alberta's coal mining communities.

In general, communities on the Western frontier were desperate for women to come to their communities (Barber, 2005; Gray, 1971). Across Alberta, men significantly outnumbered women in settler communities. Between 1900 and 1915, there were several reasons why men were drawn to Western Canada. The efforts of government, railways, coal mines, and free-lance land agents brough more than one million immigrants to the three prairie provinces (Gray, 1971). In 1911, the single members of population in Calgary was composed of 17, 337 men and 8, 979 women and the gender breakdown of singles in Edmonton was 8, 550 men to 5, 920 women (Gray, 1971). The trend during this time was for the men to arrive to the frontier first and then the women and families would follow (Carter, 2008; Gray, 1971). Frequently, a man would move to Western Canada after being enticed by the promises of the frontier, and would ask his family to find him a wife and send her to meet and live with him (Carter, 2008; Gray, 1971; Longstaff, 1885; Nordegg, 1971). This resonates with other accounts from that time. In 1885, G.B. Longstaff, a British Civil Activist, wrote about a trip he made to Canada where he learned about the opportunities that were available in the country, including the potential for mining in Western Canada (Longstaff, 1885). Longstaff identified groups that he thought needed to emigrate from Britain to Canada were young children and young women in the class of domestic servants and whole families (Longstaff, 1885).

The trend of men arriving first and the women and children following later applied to coal mining towns as well. In Martin Nordegg's memoir "*The Possibilities are Truly Great!"* (1971) he specifically notes when the first woman appears in the town of Nordegg:

> *Most of the cottages were finished and that induced the arrival of women at Nordegg. The first woman appeared with a baby. She was the wife of the assistant manager, William Stevenson. She had an adventure in crossing the river on the ferry; the cable broke and the ferry drifted down the river, but was fortunately carried by the current to the north bank. More women came with children, and soon there was a clamour for a school* (Nordegg, 1971, p. 195)

This quote from Nordegg reveals that family life in his town was an afterthought. This was a topic that many miners brought up in Alberta's Coal Commission of 1919. The coal miners living in company towns noticed that the towns were not equipped with the necessary infrastructure to support family life (Bercuson, 1978). This infrastructure includes quality schools and housing. In the town of Nordegg it is clear that the importance of housing and a school to support family life was only considered after women and their families had already arrived.

Women at that time were considered to be homemakers which sheds light to why Nordegg mentions that women only began to move to the town after the cottages were already built (Armitage, 1985; Jameson, 2016). In 1986 William Cronon, Howard R. Lamar, Katherine G. Morrissey, and Jay Gitlin identified areas in historical narratives that excluded women from western history (Cronon et al., 1986; Jameson, 2016). They found that resource frontiers (i.e. farming, fur trade, ranching, and mining) were defined by masculine economies and marginalized women (Cronon et al., 1986; Jameson, 2016). Women who lived in coal mining communities provided necessary labour for these communities but their contributions are too often overlooked. When dealing with frontier economies, such as mining, the importance of women in these spaces is diminished (Cronon et al., 1986). These economies implicitly revolve around masculine work roles and traditional feminine activities such as tending gardens, cooking meals, sewing clothing, or raising children are barely treated as economic (Cronon et al., 1986). This form of labour that the women adopted in mining towns was never considered a basis for an industrial frontier classification such as the "child-rearing frontier" or the "gardening frontier" (Cronon et al., 1986; Jameson, 2016). Instead the communities that these women worked and lived in are now viewed as part of the "mining frontier" or the "industrial frontier" (Cronon et al., 1986; Jameson, 2016; Sangster, 2000). What is seldom acknowledged is that the mining frontier would not have been possible without the labour of the women living in those communities.

What is also largely excluded from the economic narratives of the mining frontier in Alberta from 1880 to 1920 is the involvement of miners' wives in strike movements (Bradbury, 1987; Sangster, 2000; Strang & Gertner, 2019). The support of women and children during mining strikes was crucial (Bradbury, 1987). Women would turn up for parades and rallies, they

ran active auxiliaries, and staffed picket lines (Bradbury, 1987). Ruth Frager (1983) depicts an example of women in Alberta, whose husbands were United Mine Workers, attacking scabs with sticks. Additionally, in Allen Seager's article on Western Canadian coal miners (1985) there are photographs which demonstrate the presence of women at victory marches and solidarity meetings. However, while Seager briefly acknowledges the importance of "family and kin" there is virtually no mention in the article of the role of the family or women in labour struggles and achievements (Bradbury, 1987; Seager, 1985).

Whores

For young, single women on the frontier employment opportunities were less than ideal. Many believed that the economic pressures these young women experienced drove several of them into prostitution (Klassen, 1975b). Prostitution was a staple part of communities on the Western Frontier, including coal mining communities. Mining and prostitution has an established connection (Laite, 2009; Yamin et al., 2019). Sex workers were an expected and, some would say, inevitable part of Alberta's early coal mining society. Since industrialization, resource extraction has been linked to prostitution. The link between extractive industries and sex work is one that can be traced back through industrial history and is still relevant today globally. It should not be surprising that there were sex workers in Alberta's coal mining communities. However, due to a lack of information about the sex workers in Alberta's company towns this information is not particularly well known. There are several reasons why sex workers are hidden in the historical narratives surrounding coal mining. As James Gray points out in his book *Red Lights on the Prairies* the subject of sex work was, and still is in many contexts, considered taboo. Many people would not have felt comfortable discussing what they would have considered to be intimate and personal topics. Discussing the sex work and prostitution in these communities would have been immoral as well.

The presence of sex workers in Alberta's coal towns was felt in different ways. Sex work was considered a social sin that newcomers to Canada's west wanted to stamp out. Settlers believed that prostitution was fueled by rapid immigration of young men to the Western Frontier, many drawn in by the promise of work in coal mines (Armitage, 1985; Gray, 1971; Valverde, 1991). For many new coal miners, life was much slower than they were used to with many coming from well established communities in Europe, the United States, and from other more

populated areas of Canada (Gray, 1971; Longstaff, 1885; Nordegg, 1971). Sources of entertainment for young men on the Western Frontier were extremely limited, and even more so in some of the small isolated company towns these men lived in (Cronon et al., 1986; Gray, 1971; Hanon, 2013; Nordegg, 1971). There was also a shortage of women across the frontier, including in coal mining communities. With the large population disparity between men and women living in Alberta during this time and limited social activities available, many miners would take advantage of local sex workers, brothels, and red light districts on their free time. While there were many other patrons of these workers that were not miners, there was a known connection between the coal mining communities and sex work. One cowhand from Lethbridge phrased it, "[i]f you have ever been in a mining town on pay day you've seen the miners rushing for the whore houses like an army on the attack." (Gray, 1971, p. 177)

While it would have been taboo to discuss sex work and prostitution outright in these communities. Hygiene and health were important considerations at this time and they were closely tied to morality (Valverde, 1991). Thus, there were a few mentions of prostitution in Alberta's 1919 Coal Commission (Bercuson, 1978). These references to sex work were typically vague and focused on the health of miners. For example, two miners brought up the fear of catching venereal diseases from the washrooms or bath houses designated for the miners emerging from the mines with one miner saying:

> *I speak this way, that I consider it is a source of danger to everybody. Now I'll draw you a nice little picture. There's a man come in there. They go to bath. Five basins. 6 or 7 men bathing. They come out. And they're practically using the same wash basin, never cleaned or disinfected. Why, there's possibility there could be three of four of them men have that disease, and if a man come out of the mine with a skin scrub, there's a possibility that man could contract that disease immediately. He couldn't help himself, and he wouldn't know what he had for a while, so you see we could eliminate that thing by not allowing it.* (Bercuson, 1978, pp. 190–191).

Another miner referred to men catching crabs from the toilets (Bercuson, 1978, p. 117). While these references do not name prostitutes as the reason for these outbreaks, it can be inferred when another miner voiced his concerns about some members of the community making profits from bringing women into the town for a few days to service the miners (Bercuson, 1978).

In mining communities there were three main ways that sex workers operated. One method of providing services to coal mining communities was to work a circuit. This meant that

the sex workers would travel between a series of communities, never staying too long in one place. This travel between towns was described as being similar to the travel routes that priests and other religious leaders would take to visit the remote mining towns in Alberta (Gray, 1971). Life as a sex worker on the Western Frontier was precarious at the best of time. It is not surprising that the women living in the communities, mainly miner's wives, were unimpressed with the presence of prostitutes in their communities. Sex workers who serviced smaller communities, such as coal mining towns, often travelled on circuits between the communities as a safety precaution. One woman who decided to end her circuit and stay in Big Valley, Alberta to conduct her business was run out of town a few months later when the community member, directed and coordinated by the women, decided to burn her house down (Gray, 1971).

While aggression and anger from women in mining communities, often miner's wives, was often directed towards sex workers, not all communities went as far as to burn down a house of ill repute. A house of ill repute was the common terminology used when referring to an establishment where sex workers operated out of. There were several company towns that featured the presence of a house of ill repute or a brothel. This was the second way that miners would access sex workers. In small communities like company towns, the houses of ill repute or brothels would belong to the sex workers and not the company. A sex worker's home would act as her place of work and served as a brothel. A woman operating a brothel was known as a madam. The basic structure of a brothel is that the madam manages the house and employs young women as sex workers. At this time, the employed sex workers might be formally hired as housekeepers or maids to deter law enforcement from raiding their establishment. While the term houses of ill repute was used to describe brothels, I will use the term to describe a home with a singular sex worker conducts business. In this sense a house of ill repute will represent a singular sex worker who only conducts her own business from her house, this is not a brothel as there is only one singular sex worker operating out of the building and no madam.

Sex workers who established brothels and houses of ill repute in mining communities were very clever with how they conducted business. They understood that their homes, where they conducted their business, were not operated by the coal companies. In many of the company towns, their homes were some of the only establishments not owned by the coal company. Company towns were communities of harsh conditions and miners were notoriously discontent

with the way the companies managed the towns. Miners were constantly trying to escape from the presence of the company during their free time and due to the isolated nature of these towns had very little options. As a result, brothels and houses of ill repute drew in a hearty clientele. The sex workers in these communities often decked out their homes with pianos, decadent furniture, and they ensured that their patrons had access to drinks at all times. These homes would sometimes serve as the setting for a union meeting among the miners, or just a place to exist outside of the sphere of company control. The women operating these establishments were excellent business women and there is no doubt that they understood the role that their business had in the lives of the miners in company towns.

The final way that miners would have had access to sex workers was through red light districts. Red light districts were a series of brothels and houses of ill repute gathered together in one general area. Red light districts were often formed on the outskirts of towns. For example, the red light district in Lethbridge was formed at "the Point" which was outside of the city limits (Crowson, 2010). Red light districts were more of an urban phenomenon although while not as common, there were some company towns that had red light districts and not just the presence of one or two brothels or houses of ill repute. Martin Nordegg recalled the presence of a red light district in his town in his memoir *The Possibilities of Canada are Truly Great;*

> *"Suddenly, out of clear sky, a new and very threatening matter arose. A lady from outside established a tent camp, constituting a red-light district. The camp was outside the town limits, about a mile to the east."* (Nordegg, 1971, p. 199)

Besides a brief mention of the red light district and the response of the women in Nordegg to the new tent camp there are very little details about what a red light district in a company town would have looked like. There are many more accounts of red light districts in urban areas in Alberta including Calgary, Edmonton, Lethbridge and Drumheller (Crowson, 2010; Gray, 1971). While Calgary and Edmonton would have been impacted by coal mining and had some small mines around the outskirts of the city, the overall traffic to the red light districts would have been separate from mining. However, in Lethbridge and Drumheller, communities that were formed as a response to coal mining and had a large presence of coal miners, the red light districts were largely connected to the coal industry (Crowson, 2010; Gray, 1971).

It is important to note that sex work and red light districts were not exclusively found in coal mining communities in Alberta at this time. There were several other groups that provided a

demand for the industry. In general, Alberta was heavily populated by young single men who did not have many sources of entertainment. The general lack of single women in these communities as well left many of these men unoccupied with no dating prospects. This led to an influx of young single men to sex workers and red light districts. However, it cannot be denied that even though there was a demand for sex workers in general from the communities on the Western frontier, the coal mining industry, and the abundance of men it employed, was a driving force for many of these red light districts, brothels, houses of ill fame, and rotating sex workers. One man from Lethbridge described the mining industries interactions with sex workers as follows:

> *"If you have ever been in a mining town on pay day you've seen the miners rushing for the whore houses like an army on attack. You could often see them lined up outside the front door waiting their turns and they'd be in and out of the joint in a matter of minutes"* (Gray, 1971, p. 156).

Having established the various ways that sex workers operated in coal mining communities in Alberta at this time, it's important to now examine who those women were. Women working as sex workers in these communities were considered to be a lower status than other women. In fact, some would have considered sex workers to be the lowest class of women. Their profession was considered immoral by society at the time, and so they were considered immoral women as a result. In addition to this, the women who were not connected to sex work (wives, teachers, shopkeepers, etc.) were not pleased with the presence of sex workers in their communities, a sentiment evident from the case of the sex worker in Big Valley whose house was burnt down. Women in these communities viewed themselves as being part of a higher social class and morality than sex workers. Sex workers were not considered part of the community. They were ignored by other women in town and sex workers were not spoken about often.

Since it is clear sex work was not a profession to enter into lightly is begs the question of why these women would choose to become sex workers in the first place. There seemed to be very little social incentives for a woman to choose the lifestyle of a sex worker. They were constantly at risk of violence from their customers, the women in the communities, and the police. On top of the fact that their work was viewed as immoral and constantly being attacked by the church and society at large, prostitution was illegal and the red light districts and brothels in Alberta were always subject to be raided by the police. The result of these raids were that the sex workers were arrested, not the customers.

With the scrutiny and adversity that sex workers experienced at this time, it is no surprise that many of these women would work under aliases. These aliases would range from normal believable names such as “May Howard” or “Ethel Parker” to names that were clearly caricatures such as “Cowboy Jack” or “Diamond Dolly” (Gray, 1971). Several women would come to the West and would find themselves in situations where they had the opportunity to become sex workers. These reasons likely varied with some sources stating that the young women entering this field were likely coerced and forced into sex work and other sources claiming that these women found sex work to be empowering (Devereux, 2000; Valverde, 1991). For the charismatic white sex workers like Cowboy Jack and Diamond Dolly, sex work was their lifelong profession. They became staples of the communities that they lived in. For example, Diamond Dolly was well known to be friends with the chief of police in Calgary (Gray, 1971). One account of Diamond Dolly describes her as a beautiful woman who was well known around town, “[w]e used to say you’d think she was a politician’s wife the way she’d wave to all her friends and customers as she went by” (Gray 1971, p. 156). Red light districts often boasted of diversity with accounts of Japanese, Chinese, and Black brothels across the province. These brothels are documented to have lower prices for services than the brothels with white, charismatic sex workers.

The majority of sex workers in Western Canada at this time did not take on larger-than-life personas like Cowboy Jack and Diamond Dolly. Many took on pseudonyms that were very common names such as May Howard and Ethel Parker. Some of the women working as sex workers simply needed work and there was clearly demand for young women to work in the sex industry at that time. The economic pressures placed on young, single women in the west during this time were thought to be the problem leading girls to the “social evil” of prostitution (Klassen, 1975b). For example, one girl was offered a job for $2 per week when she first arrived in Western Canada but after joining a brothel she made significantly more (Klassen, 1975b). Even after paying for her room and board ($10 per week) at the brothel she was making much more than $2 per week (Klassen, 1975). These women would typically leave the trade after a short time, move to a different town, and resume using their legal name (Gray, 1971). They would be able to live off the money they made during their time as a sex worker. After leaving the trade many of these women would marry and start a family and conceal their job history. The

secrecy over their previous employment provides gaps in the historical record when trying to locate firsthand accounts from sex workers living in Alberta at that time.

Indigenous Communities

There are very little mentions of Indigenous communities in the records of coal mining communities in Alberta during this time. This is consistent with other scholarship surrounding the history of western Canada. As John Sutton Lutz says, "first white settlers and then historians erased Indians, either by leaving them out of their accounts or by placing them on the margins, where they were barely visible. The 'red men' have not vanished from vanished from the historical landscape; they have *been* vanished" (Burrill, 2019; Lutz, 2008). One mention of an Indigenous community participating in the local coal economy is the Blackfoot coal mine.

The Blackfoot coal mine presents an interesting example because it was completely owned and operated by the Blackfoot. The coal production at the Blackfoot coal mine was very small, especially when compared to neighbouring coal mines. The community would take as much coal as they needed. This meant that any person who wanted to extract coal was able to. Typically, Blackfoot men would return from the coal mine with enough coal to sustain their families and their neighbours. There are also accounts of some families struggling financially and mining coal for the purpose of selling it in towns such as Lethbridge. In this way the coal from the Blackfoot coal mine, did minorly contribute to the economic market in Alberta. The coal from the Blackfoot coal mine was considered high quality and was readily bought by settlers.

It is hard to know when the Blackfoot coal mine was first created. An early report in the Annual Report of the Department of Indian Affairs by an Indian Agent named W. M. Pocklington stated that a coal mine on the Blackfoot reserve opened in the year 1888 (Canada. Indigenous and Northern Affairs Canada. Dept of Indian Affairs., 1888). Another account states that the first mine on the Blood Reserve was opened in 1889 when a miner was hired to teach Blackfoot men how to extract coal (Hanks & Hanks, 1950). The Indian Agents on the Blood reserve in this timeframe were focused on economic profits for the Blackfoot people. They encouraged the Blackfoot to take up farming and ranching which were lucrative practices. The Indian Agent tried to sell the Blackfoot mine to white investors, however, this endeavor was not fruitful. No one wanted to purchase the Blackfoot coal mine. The Blackfoot coal mine provided

stable funds for not only Black Horse, the first documented Blackfoot miner, but also several other men and their families on the Blood reserve.

While there is evidence of Indigenous communities, such as the Blackfoot, participating in coal mining on reserve land, these accounts do not enter the dominant historical narratives surrounding coal mining in Alberta. The Blackfoot coal mine presents an interesting example because it was completely owned and operated by the Blackfoot. The functioning of the Blackfoot coal mine was light. The community would take as much coal as they needed. There are also accounts that describe other smaller mines on the Blood Reserve and several small timbered shafts (Hanks & Hanks, 1950). This meant that any person who wanted to extract coal was able to. Typically, Blackfoot men would return from the coal mine with enough coal to sustain their families and their neighbours (Hanks & Hanks, 1950). By 1900, Blackfoot coal pedlars were conducting business in nearby white communities such as Macleod and Lethbridge (Hanks & Hanks, 1950). In this way the coal from the Blackfoot coal mine, did contribute to the economic market in Alberta. The coal from the Blackfoot coal mine was considered high quality and was readily bought by settlers (Hanks & Hanks, 1950).

Indigenous Women

Indigenous women are one group that is largely excluded from the historical narratives. Cronon et al. (1986), explain that the push to bring women to the Western frontier, like through the article written by G.B. Longstaff (1885), essentially erased Indigenous women from the historical record. The sex ratio statistics that were used in section above titled “Wives” are exclusionary. They do not account for the Indigenous women who were living in those spaces (Cronon et al., 1986). The women that are counted in those sex ratios are women of European descent. As Cronon et al. (1986) state, “women were present in virtually all such places from the start. Understanding the roles such women played while they remained a minority population in preponderantly male communities is a key to understanding not just women’s lives but men’s as well. Male domesticity, male sexuality, male violence – all of these centrally involved women. Merely remarking on the low number of women in a frontier place tells us nothing about their significance to that community.”

Before European women began to move to Western Canada, many European men were known to marry Indigenous women (Carter, 1993, 2008). As European women began to inhabit

Western Canadian communities there was a movement of European men leaving their Indigenous families (Carter, 1993, 2008; Perry, 1997). Although in European communities, that were heavily influenced by Christian values, divorce was not acceptable (Carter, 2008). So in order for these European men to leave their Indigenous wives and children, it was necessary for the marriage to be invalid (Carter, 2008). The marriages between Indigenous women and European men were viewed as invalid from the perspective of European settlers. However, from the point of view of the Indigenous communities these marriages were valid. A major factor contributing to these European men easily dissolving their marriages was the fact that in some Indigenous communities (i.e. Blackfoot), divorces were considered a normal and natural part of relationships (Carter, 2008). Polygamy was also practiced in some Indigenous communities which also allowed settler communities to justify European men leaving their Indigenous wives (Carter, 2008; Lee, 1968).

In order to justify the action of European men leaving their Indigenous families, settler communities viewed Indigenous communities as primitive, immoral, and promiscuous (Carter, 2008). Indigenous women were considered to be morally corrupt, meaning that they were automatically viewed as prostitutes by default (Carter, 2008). In 1880, the Toronto *Globe* emphasized that Indigenous women had “loose morals” and were “notorious world over” (Carter, 1993). Additionally, Canada’s first *Criminal Code* of 1892 established that Indigenous engagement in prostitution as “an offense against morality” and an indictable offense even though the same actions by white settlers was categorized as a “common nuisance” (Bourgeois, 2018). This legislation made it easier to convict Indigenous women of prostitution than other women in Canada (Bourgeois, 2018; Carter, 1993). In multiple accounts, the women of the Kainai Blood Tribe, part of the Blackfoot confederacy, were thought to be the first prostitutes in Lethbridge. Their lodgings on the outskirts of town were described as the first red light district in the area (Carter, 2008; Gray, 1971; Valverde, 1991).

In response to the fear of the immoral Indigenous women, a central rationale for the pass system implemented on Indigenous communities was to keep Indigenous women of loose character away from settler communities (Carter, 1993). The pass system was an unofficial method used by the North-West Mounted Police to restrain the movements of Indigenous women off of reserves (Carter, 1993; K. D. Smith, 2009). Before the pass system, Indigenous women had a high degree of mobility. As a result of the pass system Indigenous women found that they

were restricted in their traditional subsistence strategies and in their pursuit of new jobs and resources (Carter, 1993).

During this point in Alberta's history there was a growing concern about the trafficking of Indigenous women and girls (Carter, 2008; Dempsey, 1994; Devereux, 2000; Gray, 1971; Valverde, 1991). This is largely connected to the concern over the trafficking of young girls in Britain into the sex industry (Valverde, 1991; Devereux, 2000). As prostitution was considered to be one of the most pressing social evils there was considerable concern for all women who were considered to be forced into the industry (Devereux, 2000; Klassen, 1975b; Valverde, 1991). There was rising concern over the alleged sales of young Indigenous girls to white men (Carter, 2008). In 1886 there was an alarming letter published in *The Toronto Mail* that claimed there was a "state of immorality" in southern Alberta (Carter, 2008). Reverend H.T. Bourne, who wrote the letter, stated that there were over "twenty cases of bargain and sale of young Indian girls to white men within the last three years" (Carter, 2008, p. 149).

Similarly, Reverend Samuel Trivett, a missionary on the Blood Reserve near Fort Macleod, expressed concern that Indigenous men were selling the women in their communities to white men (Carter, 2008; Gray, 1971; Valverde, 1991). This remark from Trivett was met with outrage throughout the community as many believed the claims to be unnecessary. A response to Trivett's claims was published in the *Macleod Gazette* on March 16, 1886:

> *"According to Mr. Trivett's statement one not acquainted with the facts might easily imagine there is a market for girls going on at full blast at Macleod. One might also imagine an auctioneer introducing the various victims, dwelling on their merits and extolling the article he had for sale for the most grossly immoral purposes. We can imagine their horror struck faces as they listen in fancy to the "going, going, third and last time, are you ready – gone!" Another pure-minded Indian maiden sacrificed at the alter of human depravity for a small consideration of dollars and cents.*
>
> *It is needless to say no such thing is going on. We do not argue that there are not many cases where white men do keep Indian women. We may show our depravity when we say we do not see anything wrong in this. In the great majority of cases the primitive bonds of matrimony were entered into long before the civilizing influence of white women was felt. In the great majority of these cases the white men have honourably clung to their bargain and have provided for their Indian wives according to the best of their ability.*
>
> *It is stated that these women are taken from the camp, kept a certain time and then abandoned to become common prostitutes around the town. But only one side is shown. Nothing is said of the fact that many of these women were prostitutes before they went to live with the white men and in many cases the overtures for this so-called immorality comes from the Indians, or from the women themselves. Mr. Trivett neglected to say there are scores of*

Indians on the reserve, on which he is a missionary, who practice the revolting and unnatural crime of peddling their women around the towns and settlements.

There is another light from which to view this question. If Mr. Trivett had referred to it, it would have shown a greater desire on his part to deal fairly and impartially with this matter. We refer to the Indian marriage custom. Among the Indians there is no marriage ceremony. If an Indian fancies a lady friend he simple has an interview with the old man and after a little lively barter secures his prize in consideration of his giving two or three horses for her, according to her beauty, and carries her home. According to the law of the Indians, and according to the law laid down by the Government, it is a legal marriage. A white man can marry an Indian in the same way and it has been held in the North West as a legal marriage" (Gray, 1971, p. 219).

This response to Samuel Trivett's claims depicts common perceptions of Indigenous women at this time. Simultaneously the response claims that Indigenous women were already considered prostitutes before engaging with white men and that there are no marriage ceremonies among Indigenous communities.

Discussion

The results illustrate how women and Indigenous communities are selectively included in the dominant historical narratives from Alberta's mining frontier. These inclusions are interesting for many reasons. Women are too often excluded from historical narratives and the existing scholarship on coal mining in Alberta is no exception. There is so much to learn when we can introduce new diverse perspectives. Moving forward, literature on resource-dependent communities must provide meaningful attention to women and particularly Indigenous women in order to gain a fuller understanding of the impacts of coal mining in Alberta. Additionally, highlighting the experiences of Indigenous women preserved in the historical record allows us to begin to unpack the complexities regarding settler colonialism and the erasure of Indigenous women from the landscape.

The Importance of Highlighting Women's Experiences

The results of this paper focuses on three different groups of women; wives, whores, and Indigenous women. To understand the complexities surrounding the references made to Indigenous women in the results it is critical to understand how other groups of women were included and excluded as well. Therefore, this section will dive into what the results point to in regards to wives and whores. This literature review focuses on where women were mentioned in the historical narratives surrounding coal and adjacent material. Unsurprisingly, women living in

coal mining towns (i.e. wives of miners, shopkeepers, and teachers) were mentioned more frequently than Indigenous women and women outside of the communities in the literature. The results remind us that women in mining communities have been stereotyped as wives or whores even in the early stages of industrialization (Bradshaw et al., 2017; Lahiri-Dutt, 2011).

Wives were the women who most frequently met the societal expectations of these communities. Their roles in these communities were depicted as being mostly confined to the domestic realm. These women were in charge of child rearing and domestic labour. They provided an essential service in the mining communities. These communities would not have been able to function socially as a community without these women. However, this group of women, mentioned most frequently in the literature, were mentioned very little in the larger historical records of coal mining society. This is clear when we see brief mentions of how miner's wives contributed to union efforts. The unpaid labour that these women did in both the domestic and public spheres was very likely more influential than we see in the dominant literature currently.

Additionally, sex workers also had much more power than what we can see from the brief mentions of red light districts, brothels, and rotating sex workers in literature on early coal mining society in Alberta. The results make that very clear. Sex workers in Alberta's coal mining communities were considered a staple feature of society (Gray, 1971). Sex work in coal mining communities in the province were largely driven by a consistent clientele of miners. Women engaging in sex work in these communities should be notable when considering the labour and economy of coal mining communities. The way that women engaged in sex work during this time was an inventive way of engaging in labour and gaining financial stability, whether or not they chose to remain in the profession.

While many women chose to operate as a sex worker under an alias, there is a clear distinction between those who intended to leave the profession and the women that this paper refers to as charismatic white sex workers. The experiences of white women who worked in the sex industry in Alberta from 1880 to 1920 were predominantly featured in this literature review. While their stories did not include much detail of their daily lives, the lore surrounding charismatic white sex workers like Diamond Dolly and Cowboy Jack were preserved in the historical record. As mentioned in the results, white sex workers who went by understated aliases

such as May Howard or Ethel Parker, were not personified in the narratives surrounding red light districts but instead their stories became generic and all-encompassing descriptions of what life as a white sex worker was in coal mining communities. However, in multiple sources there were brief mentions of diversity within the red-light districts and brothels of coal mining communities. There were Black and Asian sex workers who worked in these communities. Their stories are no doubt unique and were not mentioned in the social narratives included in this review. What was clear from the literature is that white sex workers, charismatic white sex workers in particular, had the most expensive rates for their services.

What the emphasis on charismatic white sex workers likely depicts is that within historical narratives on sex work the women history focuses on is an easily digestible version of a sex worker. A woman who is larger than life and lives a life of luxury from her work. Women like Diamond Dolly and Cowboy Jack are the success stories in this area. They are examples of women who were respected regardless of their profession. The stories of Black and Asian sex workers in the same communities are not depicted in the historical record with the same intensity. They are not given names or characteristics beyond their profession and race. We know that they were present in these communities but we know very little about their role.

The importance of highlighting women's experiences in the early history of extractive industries is to move beyond the narratives that women are passive victims of extractive industries. Even though women were excluded from overarching historical narratives of labour and economics in early coal society in Alberta, they were not idly standing by. Instead they were finding ways to exist in a heteropaternalistic and heteropatriarachal system that was both subversive and impactful. Contributions to union efforts and sex work are both examples of how women made important impacts to coal mining communities. Scholarship on extractive industries tends to center male histories. When this is the case we are missing important pieces of history. This is not surprising as sex workers, and women in general, too often make up an invisible labour force connected to extractive industries (Bradshaw et al., 2017). The history presented in this paper highlights the role women played beyond the standard inclusions made in the dominant historical record and illuminates the foundation that patterns of exclusion that continue in contemporary analysis of the social impacts of extractive industries.

Erasure of Indigenous Women

The way that Indigenous women were included in the historical narratives surrounding coal presents a clear example of why research in this area must be intersectional. Not only did Indigenous women face barriers because they were women navigating through a male focused and dominant communities but their identity as Indigenous complicates their role in settler communities. We must be mindful that the inclusions of Indigenous women in the historical narratives were intentional and that same intentionality influences where these women are erased from the same stories. Settler colonial theory clearly outlines that the aim of settler society is to erase Indigenous people from the land.

Not only were Indigenous communities erased from the historical coal mining narratives they were also erased from the local economy. This would have had a tremendous impact on these communities, including Indigenous women. The Blackfoot coal mine is an important example of how Indigenous economic contributions are largely excluded from economic histories. The Blackfoot coal mine was a small mine that had economic impact in the local area. If the Blackfoot coal mine was bought by a coal company, it might have made an appearance in economic history of coal mining in Alberta. This is not to ignore the impact of Indian Agents that lived on reserves in Alberta. The Indian Agents on the Blood reserve encouraged the community to engage in agricultural labour and after the coal mine did not sell, the Indian Agents discouraged coal mining on the reserve. One of the goals for the Indian Agents was to generate prospering income revenues for the communities they lived in. However, by pushing for agriculture over coal mining, the Blackfoot coal mine was excluded from the broader labour landscape in Alberta. Coal mining was the beginning of the industrial frontier in Alberta. To guide labour in the community away from the Blackfoot coal mine and towards ranching and farming, the Indian Agents denied the Blood reserve the opportunity from diversifying their income and entering the new emerging workforce. The example from the Blood reserve prompts the question: what other Indigenous endeavors connected to coal mining did not make it to the dominant historical narratives?

When a community is excluded from the local economy, they are subject to financial stresses. Additionally, Indigenous communities in Alberta were monitored by Indian Agents who determined what work would be lucrative for the people living in their purview. This meant that

there were very limited sources of income in Indigenous communities, which is an important consideration if Indigenous women were indeed involved in sex work. The financial stresses in their lives would place them in a high-risk position and thus might have led to some women pursuing a living through sex work. After all sex work was a profession that was quite lucrative, especially if you lived in close proximity to coal mining communities. However, just because Indigenous women were claimed to be the first prostitutes in some coal mining communities we cannot simply assume this is the case.

The accounts of Blackfoot women being the first sex workers in Lethbridge, with their lodgings considered the first red light district should be considered with scrutiny. As Sara Carter (1993, 2008) mentions, Indigenous women were constructed as morally corrupt prostitutes for several reasons, including the need for settler society to position themselves as superior to Indigenous communities. By exclusively including Indigenous women in relation to sex work the body of literature surrounding coal mining society in Alberta has successfully erased Indigenous women from the landscape, the exact aim of settler society. Now Indigenous women are no longer people with agency and control over their land and situations, they are reduced to being silent victims.

Within the categories of wives and whores so often used to include women in extractive industry research, Indigenous women fall into the latter category. However, even within the sex work communities in early coal society in Alberta, Indigenous women are mentioned very seldomly. Where they are mentioned, it is not clear if Indigenous women were being exploited involuntarily by settler communities, or actively engaging in sex work. Understanding that white charismatic sex workers were the ones included most frequently in the literature, it another example of how Indigenous women are erased from history. Not only are they viewed as sex workers, whose labour is categorized as invisible (Bradshaw et al., 2017), they are also removed from the history because they are Indigenous. Further, Indigenous women are considered to fit the category of whores by default and were unable to change their position within the wives and whores binary, whereas white women were able to opt in and opt out of the label.

Conclusion

In conclusion, unpacking the existing literature surrounding coal mining communities in Alberta from 1874 to 1919 revealed several groups that were excluded from the historical record.

Critical race theory, feminist theory, Indigenous feminist theory, and settler colonial theory are fundamental to my understanding of the sources presented in this literature review. The first group excluded from the dominant historical record is the wives living in coal mining communities. These women were considered to be women of good moral character who fulfilled the domestic labour in the communities. In addition to their contributions to domestic labour they were important contributors to union activity, but their stories are not included in the historical record in the same way the miners' stories are. The second excluded group are women who live on the outskirts of town: whores. These women were connected to coal mining communities in various ways, either through traveling circuits, houses of ill repute, or red light districts. They were staples in coal mining communities and their services are intertwined with the economic histories of coal mining in Alberta. Next this paper outlines that Indigenous communities are also excluded from coal mining histories in the province. Even though there were Indigenous communities, such as the Blackfoot, who were engaged in coal mining and involved in the emerging industry in various ways, they are seldom mentioned in the dominant record. Finally, this literature review reveals a fourth group that intersects the exclusions of women and Indigenous communities: Indigenous women. Indigenous women in Alberta were intentionally included in coal mining history as the first prostitutes in these communities. However, their involvement in the sex industry is not quite what the dominant historical narratives make it out to be. Indigenous women were considered whores by default by settler communities. They are not mentioned meaningfully in accounts related to sex work in coal mining communities beyond this initial claim. Beyond that, they are not mentioned in the records related to coal mining activity in Indigenous communities. The selective inclusion of Indigenous women in this way works to erase them from the landscape and economic history. This paper outlines the way literature on coal mining in Alberta upholds the restrictive categories women in resource-dependent communities are expected to occupy and the ways in which wives and whores is far from an accurate portrayal of women in this context.

The portrayal of Indigenous women as whores has real contemporary implications. Robin Bourgeoise (2018) explores the connections between prostitution in early colonial British Columbia to the contemporary violence against Indigenous women and girls in present day Vancouver, with many similarities to the Alberta context. Dr. Bourgeoise establishes that the

historical attitudes and characteristics attributed towards Indigenous women and girls during white settlement in Canada continue to impact the lives of Indigenous women and girls today. The historical attitudes and characteristics attributed to Indigenous women and girls in British Columbia mirror the perspectives of white settlers towards Indigenous women and girls in Alberta mentioned in this literature review. Indigenous women and girls were considered to be prostitutes by default. This sheds light on the treatment of Indigenous women connected to Alberta's coal mining communities. The specific inclusion of Indigenous women as prostitutes in the dominant historical narrative surrounding coal mining is directly connected to the deeply rooted violence that Indigenous women and girls face, not only in Alberta but across the country. In 2020 the government of Alberta rescinded the 1976 coal policy that restricted coal mining in the province with no public consultation (Dryden, 2022; Fletcher & Omstead, 2020). Later the coal policy was reinstated however, four advanced coal projects (Grassy Mountain, Tent Mountain, Vista coal mine, and Mine 14 project from Summit Coal) are allowed to proceed (Dryden, 2022). With these new developments around coal mining in the province, the history of coal mining communities presents important context to fully understand the impacts of resource-dependent communities, specifically regarding Indigenous women.

CHAPTER 4.0: Conclusion

Thesis Overview and Study Significance

Overall, the history of coal mining communities in Alberta is complex and provides an interesting context for the overarching theoretical framework of sustainability and resource dependency. The paper-based chapters in this thesis shed light on the social, economic, and environmental impacts of coal mining in Alberta. Contributing to the broader literature on sustainable livelihoods and resource dependency, Chapters 2.0 and 3.0 provide important insights into the complexity of the coal industry and its impact on various communities in the province.

Chapter 2.0 examines the history of coal mining communities in Alberta from 1874 to 2022 in order to understand the impacts of coal mining in the past, present, and future. The use of the community capitals framework creates a comprehensive history of the changes financial, natural, human, social, and political capitals have undergone in coal mining communities as well as the province's coal industry. Further, the case studies spotlight social, economic, and environmental historical narratives of company towns in Alberta. This paper is a contribution to literature on resource dependency as it explores patterns and trends of mining dependency from the beginning of industry to the present in one region. This research takes the existing literature and moves beyond a social and economic historical approach to encompass the role of the industry in Alberta as well as the long-standing history of mining dependence.

The second paper chapter in this thesis, Chapter 3.0, focuses on the exclusion of certain groups from the historical record of coal mining in Alberta, specifically women, Indigenous communities, and Indigenous women connected to coal mining communities. This paper is an exploration of who is excluded from the histories of mining dependent communities and Alberta and why. Resource dependent communities, especially mining dependent communities, are typically heteropaternalistic and heteropatriarchal. Women in Alberta's coal mining history were categorized as either wives or whores. Indigenous women were categorized as the latter automatically due to the position they held in frontier settler communities. On top of this, Indigenous communities, and thus Indigenous women, were excluded from local coal economies. This paper contributes to resource dependency literature by examining the complexities of social and economic narratives at the beginning of coal mining in Alberta. Using theories such as

critical race theory, feminist theory, Indigenous feminist theory, and settler colonial theory, this chapter adds to the existing scholarship on mining dependent communities in Alberta.

As Alberta faces new possibilities of coal mining projects, we must revisit the past. The historical narratives of resource dependent communities are far more than just a setting to consider. The social, economic, and environmental histories connected to coal mining in the province shape the outcomes that are likely and even possible. Ultimately the future of coal mining in Alberta must be guided by a commitment to sustainability. This thesis provides a resource to determine the potential impacts a future of coal mining will have on communities. Understanding the patterns and trends the industry has undergone in the province as well as the deeply rooted colonial violence connected to mining communities provides necessary context for the future of coal in Alberta. This work hopefully provides valuable contributions surrounding who truly benefits from coal mining and who takes on the burden of the social, economic, and environmental impacts.

Areas for Future Research

Future work is needed to expand on resource dependency and coal mining in Alberta specifically building on the second paper chapter of this thesis, Chapter 3.0. Moving forward projects solely focusing on Indigenous women are necessary. Further, an interesting future research project would be to follow the wives and whores binary over time in Alberta's resource dependent communities.

Indigenous Women and Coal Mining Projects in Alberta

Chapter 3.0 of this thesis highlights the social and economic narratives of women, both non-Indigenous and Indigenous, in Alberta's coal mining communities. It broadly portrays the experiences of non-Indigenous women, Indigenous communities, and Indigenous women to explore the gendered binary of wives and whores documented in previous resource dependence literature and from that binary the erasure of Indigenous women from settler narratives. However, the broad nature of this chapter leaves space for focused research on the histories of Indigenous women in spaces specifically.

As mentioned in the introduction, this research was limited by COVID19, limited archival materials, and my own perspective as a non-Indigenous settler. The experiences of

Indigenous women in resource dependent communities are complex and multifaceted. Further research should be conducted to broaden the understanding of the intersectional position Indigenous women occupy in Alberta's coal mining communities. Oral histories, in-person interviews, and focus groups are all qualitative research methods that would strengthen the existing scholarship presented in this thesis. Indigenous led research in this area would bolster the previous literature on resource dependent communities and sustainable livelihoods.

Following the Wives and Whores Binary through Time

Another area for future research would be to broaden the exploration of the wives and whores binary present in Alberta's coal mining histories. Following this binary through time to the present day would likely present interesting and informative connections and patterns. The experiences of women and gender diverse people in resource dependent communities is an important area for future research. Through time, the experiences of women provincially, nationally, and globally have improved with human rights developments. However, women are still considered to be a marginalized and vulnerable group meaning gender-based analyzes are critical when exploring the dynamics of resource dependency. Moreover, the wives and whores binary has undoubtably changed with industry over time. The introduction of women into the workforce likely altered the original wives and whores binary presented in this thesis. Future work into gendered roles in mining dependent communities in Alberta would add to the literature about the gendered impacts of resource dependent communities and the capacity of women in those communities to engage in sustainable livelihoods.

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