Masculinity, labour, and Indigeneity: identity negotiation on the path to a just transition

by

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Abstract

As pressure continues to grow to reduce global emissions, recognition of the widespread impacts on various groups from such efforts has inspired calls for a just transition. On the one hand, Canada's path to decarbonization must address workers who stand to lose their jobs, while ensuring this does not compromise just futures for marginalized groups. In particular, the future that a just transition is working toward must attend to Indigenous sovereignty to resist reproducing existing systems of inequity. To explore this tension, I attend to the instrumental role of identity in shaping how different groups navigate the transition. I approach the energy transition with an emphasis on materiality, framing resource extraction as a process involved with both fossil fuel energies and renewable technologies. I begin by acknowledging the stereotypes that surround those who work in resource extraction and, in so doing, draw attention to the class, gender, and colonial narratives that support these extractive identity archetypes. Through identity scholarship, I seek to explore paths towards a just transition that emerge once the influence of these extractive identities has been acknowledged. The three questions guiding this work include: 1) What relationship does identity have to either resistance against or support for transition? 2) What role does livelihood actually play in identity? 3) How might we mobilize the values expressed by extraction workers to support, rather than resist, transition? I take three unique approaches to explore these questions. First, I conduct a thought experiment emerging from a social media analysis on the potential for fossil fuel worker identities to be co-opted by bots on social media to sway public perceptions on a transition. Then, I analyze semi-structured interviews with Alberta oil and gas workers and, finally, semi-structured interviews with mine workers from the Tłı̨chǫ nation. I find that some identities are more relevant to the energy transition than others and advance the concept of politically salient identities to capture the relevance of extractive workers to the broader transition conversation. I argue that resistance to transition does not

emerge from a role commitment to extractive labour, but the status and class mobility made possible through employment in the industry. The perceived class-based gender stereotypes about field-level workers act as a key source of mistrust among workers in transition policies. I, therefore, highlight the importance of class analysis in energy transition research and the need for meaningful participation of impacted labour groups in imagining energy futures. I also argue that broad identity meanings serve as an important source of resilience for groups navigating social change, particularly for the Tłı̨chǫ. Finally, I advocate that transition planning must explicitly focus on rural, Indigenous workers so communities are not coerced into resource development to fuel rising global demand for rare earth minerals.

Preface

The main body of this dissertation is comprised of three articles prepared for publication in academic journals.

The first article, *Social media and the politics of identity: the influence of non-human actors in the climate crisis,* is a thought experiment that represents the sole research and writing contribution of Angeline Marie Letourneau. It emerges from a research project conceived and conducted by Letourneau in collaboration with Dr. Debra Davidson, Dr. Carrie Karsgaard, and Dasha Ivanova on the X accounts of Albertan oil and gas workers. The collaborative results of this project are summarized in two publications not included as part of this dissertation.

'It provides the lifestyle that we have': masculinity, class, and fossil fuel worker support for a just transition represents the sole research and writing contribution of Angeline Marie Letourneau. The study was reviewed and approved by the University of Alberta Human Research Ethics Board (approval number Pro00121714).

Indigenous labor, land, and an anticolonial energy transition represents the sole writing of Angeline Marie Letourneau but emerges from interviews conducted by Letourneau and Lucas Schmaus as part of Case Study 1 in the Partnership Development Grant Project, *Advancing Impact Assessment For Canada's Socio-Ecological Systems,* of which Dr. Debra Davidson is a PI. This case study was done in a formalized partnership with the Tłı̨chǫ nation, who maintains ownership of this data. Transcribing was completed by an undergraduate research assistant, Claire Neilson. The study was reviewed and approved by the University of Alberta Human Research Ethics Board Pr0Pro0012171 and Aurora Research License #17144.

All interviewees gave their informed consent before participating in this study.

For George and Anne Fleming,

who instilled in me an appreciation for the important things in life

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Chapter 1- Introduction

Where we begin

In May 2016, I was one of over 88,000 people forced to flee Fort McMurray, Alberta, from the out-of-control wildfire, The Beast. It was my first day of work in the reclamation department of one of the oilsands mining operations north of the city, cut short by one of my colleagues yelling across the office, "The fire jumped the river, my house is gone!"

This wildfire would go on to make international headlines as over 100,000 people fled the city and could not return for over a month while firefighters struggled to control the blaze. As a third-year conservation biology student at the time, the irony was not lost on me that this unprecedented fire event—whose magnitude was exacerbated by climate change drying out the boreal forest— happened to affect a city that exists almost entirely to support oilsands mining.

Before The Beast, I had never truly appreciated that climate change could and would someday affect me. It had always been something situated in the future, a problem that only coastal communities would have to deal with. In the weeks and months that followed the evacuation, I sought out colleagues with whom I could talk about this traumatizing experience. Wasn't that scary? How were you able to escape? What can we do to make sure that never happens again? Do you feel guilty that our work in oil and gas contributes to worsening climate events like wildfires? This last question would always lose people, including many of my more environmentally inclined colleagues. Responses ranged from outright denial of any relationship between wildfire severity and fossil fuel extraction to "hands-tied" responses that argued the world would continue to demand fossil fuels regardless, so it was better that oil came from places like Alberta with high environmental and labor standards. The few who acknowledged the relationship between fossil fuel extraction and emissions tended towards a familiar jobs-versus-

environment script that positioned the quality of life we enjoyed in the province as almost entirely due to the oil and industry.

I returned to school that fall defeated, surprised that The Beast had not prompted the same proverbial wake-up call for my colleagues as it had for me. Why were people unwilling to acknowledge the role of fossil fuel extraction in exacerbating climate change-related events? As I now know, individual employment in fossil fuel extraction is not a significant part of ongoing emissions from the sector, but this still did not help me understand the reluctance of my co-workers to at least acknowledge the relationship between fossil fuels and climate change. For an industry that prides itself on technological innovation (e.g., Canada's Oil Sands Innovation Alliance, 2024), this resistance to scientific fact defied logic, suggesting that simply possessing knowledge about climate change wasn't enough—there was more at play keeping certain communities invested in the fossil fuel industry's success.

The long-standing debate pitting jobs against environmental protection hinders progress on climate action (Huber, 2021). For extraction workers, climate action is frequently associated with the loss of their jobs (e.g. Gazmararian, 2024). Calls for a just transition have arisen as a response to concerns for worker wellbeing.

In the contemporary context, a just transition has been conceptualized in relation to a broad range of social impacts from decarbonization. This broad scope is important because while a shift away from fossil fuels may mean less carbon emissions, it does not inherently mean a disruption to existing power relations that have shaped incumbent energy systems. For example, the rise of decarbonized technologies creates a demand for rare earth minerals, potentially leading to increased resource extraction with associated jobs and royalties. The extent to which local communities and Indigenous peoples will benefit from this development or experience increased harm is not a given. In short, switching to decarbonized forms of energy is insufficient to achieve social justice in a sustainable future.

Decarbonizing our economy isn't just about replacing infrastructure; it's a fundamental shift in the social and political landscape shaped by fossil fuels. Taking advantage of this pressure point, fossil fuel companies have infiltrated these social and political structures to obstruct climate action by fostering forms of extractive populism (Gunster et al., 2021), among many other documented strategies. Part of what has made their efforts so successful is the entanglement of cheap fossil fuel energies with the public's understanding of 'a good life' and the linking of the promise of this life to the identities constructed by those who come in contact with the industry (Daggett, 2019). In other words, decarbonizing our economy requires changing not only the avenues through which we get our energy but also addressing the identities that have formed around existing systems.

By examining how identities shape perspectives on the energy transition, this dissertation aims to inform strategies for a more just and equitable transition. Guided by just transition scholarship's attention to equity, I advance scholarship on the instrumental role of identities during these transitions. I demonstrate how these identity processes are vulnerable to being co-opted by those with vested interests and yet can still align with the transition. I seek to challenge the homogenizing narratives about certain identity groups and their relationship to extraction, looking to build working-class solidarity for a just transition.

Drawing on literature from energy justice, masculinities, eco-socialism, and identity scholarship, the three papers in this dissertation attend to the instrumental role of identity in shaping how groups navigate the transition. I do so by exploring two dimensions of Canada's energy transition. The first is the need to transition workers in fossil fuel-dependent regions to jobs in the low-carbon economy. My research challenges assumptions that workers are solely concerned with job security by examining the complex interplay between identities and the energy transition. By exploring how identities shape workers' perspectives and priorities, I aim to reveal the diverse experiences and needs within this

population. This nuanced understanding is crucial for developing a just transition that addresses not just economic anxieties but also the social and cultural dimensions of change. Furthermore, Canada's regional disparities in resource dependence create unique identity attachments to extraction. Understanding these mechanisms can help tailor solutions that foster broad-based social support for a smooth and equitable energy transition.

The second dimension of a just transition explored in this dissertation is the situatedness of Canada and energy systems within the ongoing structure of settler colonialism. In particular, I am interested in how achieving a truly 'just' transition requires addressing the ways settler colonialism is perpetuated through the development of decarbonized technologies. Green colonial narratives mobilize the urgency of the climate crisis to justify ongoing resource extraction on Indigenous lands, often with limited benefit to communities.

This dissertation consists of three stand-alone papers, each exploring different dimensions of identities and resource extraction. In what follows, I provide an overview of the scholarship in which this work is situated. Next, I outline the questions and objectives that underscore this research before providing an overview of my methods and my motivations for using them. I briefly discuss the limitations of this work, before moving into the body of this dissertation.

Background:

Just Transition

A just transition centers on fairness and justice on the path of decarbonization. The term emerged from North American labour groups in response to new environmental regulations in the 1960-70s that had widely felt impacts on the American industrial sector (Stevis & Felli, 2015). Tony Mazzocchi, the American Oil, Chemical, and Atomic Workers Union (OCAW) leader, argued that saving jobs should

not be the trade-off of environmental regulations to protect workers and their communities from harmful substances. The union movement quickly aligned with environmental groups to counter the 'jobs versus environment' discourse promoted by polluting industries. In the subsequent years, the Oil, Chemical, and Atomic Workers (OCAW) union proposed a superfund for workers aimed at facilitating training and reallocation of workers following the closure of toxic facilities (Wang & Lo, 2021).

The scope of a just transition broadened through the ‘90s as it spread across NGOs and international organizations (Cigna et al., 2023). In 2010, the final declaration from the Climate Change Conference in Cancun emphasized the importance of 'a just transition of the workforce that creates decent work and quality jobs' (UN, 2010: 4). A ‘just transition’ was also included in the preamble to the Paris climate conference agreement (UN, 2015).

Interest in just transition policy has sparked considerable academic debate about what a just transition should entail. Labour groups advocate for worker retraining, economic development, and investment plans, while environmental justice groups tend to adopt a more holistic approach, emphasizing community engagement and democratic participation in decision-making (Wang & Lo, 2021). Since the late 1990s, groups with a labour-oriented perspective have predominantly shaped the broader conversation on transitions, focusing on sustainable development and 'green jobs' (Stevis & Felli, 2015; Wang & Lo, 2021). In contrast, environmental justice groups have encountered more resistance, although their efforts are increasingly recognized in regional acknowledgements of how environmental harms disproportionately affect marginalized communities.

The increasing interest in just transitions has brought the scope of the concept under scrutiny by academics and activists alike. “‘Narrow’ formulations of a just transition – which stress its impact on specific industries or groups such as workers – have been seen as separate from ‘broad’ interpretations of the concept, which account for its effects on a larger number of stakeholders and their communities”

(Wang and Lo, 2021:3). Wang and Lo further delineate five central themes that have shaped the discourse on just energy transitions in academic circles: (1) just transition as primarily concerned with labour, (2) just transition as an integrated framework for justice, (3) just transition as a socio-technical transition theory, (4) just transition as a strategy for governance, and (5) just transition in terms of public perception. They point out that the focus of scholarship has predominantly been on who should be included in the planning process of these transitions rather than addressing the aspects that have historically rendered transitions unjust. Additionally, they observe a limited acknowledgment of the existing literature that outlines how just transition frameworks can be manipulated to serve the interests of influential and powerful entities.

Without addressing existing inequities, energy transitions risk creating new injustices and vulnerabilities while failing to tackle the foundational causes of injustice in energy markets and the broader socio-economy (Sovacool, 2013). There is an important difference between affirmative and transformative versions of a just transition (Stevis & Felli, 2015). The affirmative approach seeks to achieve equity and decarbonization within the existing institutional framework, focusing on minor adjustments rather than radical changes. In contrast, the transformative version calls for a profound restructuring of political economies and power relations among actors, advocating for significant systemic changes to address underlying issues.

A just transition in Canada

Canada's first federal just transition initiative focused on communities dependent on thermal coal mining. *The Task Force on Just Transition for Canadian Coal Power Workers and Communities* was launched in 2018 to "provide the government with recommendations for how to support a just and fair transition for Canadian coal communities and workers" (Task Force, 2018: 2). The two federal ministries responsible for overseeing this pilot project— Natural Resources Canada and Employment and Social

Development Canada— were not prepared to support a just transition to a low-carbon economy for workers and communities (Office of the Auditor General of Canada, 2022). One major problem was the lack of clear guidelines about how programs should be implemented within communities, which resulted in funding intended for worker well-being being diverted to municipalities, businesses, and nonprofits. Municipalities primarily allocated funds towards infrastructure projects, while businesses and nonprofits used them to foster long-term business activities rather than directly addressing the immediate needs of workers. The gender-based analysis of the pilot was also deemed inadequate and did not account for how women and minorities working in coal or linked industries may be uniquely impacted by the coal phase-out in their communities. It also did not account for indirect effects on community members not employed in coal. Despite ambitious targets, only 4 out of the 10 task force recommendations were achieved.

Subsequent national engagement through surveys and calls for comment after the failed pilot project revealed widespread confusion about the meanings of "just transition" and "sustainable jobs" (Natural Resources Canada, 2023: 32). The majority of opposition was focused on criticisms of federal climate actions and policies, not the need to create sustainable jobs across Canada. This feedback likely influenced the reframing of Canada's just transition policy to the "Sustainable Jobs Plan," though this relabeling did little to shift the reception to the legislation (e.g. Johnson, 2023).

The Sustainable Jobs Act, voted through the House of Commons on April 15, 2024, is Canada's first substantive piece of legislation pursuing a just transition:

> *"The purpose of this Act is to facilitate and promote economic growth, the creation of sustainable jobs and support for workers and communities in Canada in the shift to a net-zero economy through a framework to ensure transparency, accountability, engagement and action by relevant federal entities, including those focused – at the*

national and regional level – on matters such as skills development, the labor market, rights at work, economic development and emissions reduction."

As the name suggests, the Sustainable Jobs Act takes a labour-focused approach to the just transition. It does acknowledge that "a sustainable jobs approach should be inclusive and address barriers to employment with an emphasis on encouraging the creation of employment opportunities for groups underrepresented in the labour market, including women, persons with disabilities, Indigenous peoples, Black and other racialized individuals, 2SLGBTQI+ and other equity-seeking groups" (2023). The Act places considerable emphasis on the participation of Indigenous peoples, requiring that three members of the fifteen-person Sustainable Jobs Partnership Council must represent Indigenous peoples and further states:

"The Government of Canada is committed to strengthening its collaboration with Indigenous peoples with respect to a net-zero economy and the creation of sustainable jobs and to taking the Indigenous knowledge of Indigenous peoples into account when carrying out the purposes of this Act."

While the Act certainly implies the importance of securing equity for marginalized groups, its approach to a just transition remains narrow and reifies existing institutional frameworks. Unchallenged, the Act is positioned to reproduce the overlapping structures of power that have created inequities among different groups, including, but not limited to, settler colonialism, capitalism, and patriarchy.

Identity is a vital organizing element of social life and plays an important role in the formation and maintenance of structures of power. The Sustainable Jobs Act itself is a product of various identities. Those who drafted it, the public and NGOs who advocated for a just transition plan, and even those who dispute the need for a transition altogether – all bring their own perspectives shaped by their identities.

This influence underlines the importance of understanding identities in the context of securing a just transition, which I will explore in the following section.

Identity

Identity is, at its core, our sense of self. It is multifaceted and ever-changing, socially informed by various influences throughout our lives (Brekhus, 2020). The sociological conception of identity is informed by the social accomplishment of difference and by a concern with how the accomplishment of difference plays into the politics of exclusion and inclusion and reproduces social inequalities.

Brubaker and Cooper (2000) argue that the multiple meanings of identity render the concept unusable. They argue that identity is meaning-oriented and different from instrumental interests, which, in their eyes, is what many identity scholars are trying to study. They further posit that combining race, ethnicity, gender, nationality, and other social constructs under the umbrella of 'identity' brings little gain when these categories each provide a rich source of inquiry in their own right, without the need to combine them into the messy conglomeration of 'identity.' However, I maintain that looking at these seemingly dissimilar constructs under the broader term 'identity' is still useful because there is value in their formal, general, analytic similarities which help to identify similarities and difference across categories and in generalizable identity processes (Brekhus, 2020). Furthermore, while gender, racial, and other collectives are categories with the potential for group formation, they are not groups in and of themselves (Brubaker, 2006). Turning to identity as our analytic category allows us to recognize the diversity more easily within collectives without slipping into potentially homogenizing language.

Symbolic interactionist identity theory explores individuals' attempts to maintain and enhance self-esteem by matching their behaviours to standards associated with their role and identities. Individuals are motivated to keep perceptions of themselves consistent with their various identities (Burke and Stets, 2009). Much of the scholarship that I will draw on below emerges from the symbolic

interactionist tradition, as I find this approach useful for motivations behind identity maintenance and change. However, like Brekhus (2020), I understand "identity and identification in the pluralistic ways that they are employed by social actors and described by social analysts and to explain the interactional and social boundary work that identity does" (9).

Generally, identity may be categorized into three types of identity: personal, role, and social identities (Burke and Stets, 2009). Personal identities are the unique collection of characteristics and values that define us as individuals. Social identities derive from our membership within specific groups, informed by the knowledge that we are part of that group and the emotional significance we associate with that membership (Islam, 2014; Tajfel and Turner, 1986). Role identities represent performance expectations, such as parent, spouse, or worker, and are more likely to change than social or personal identities (Carter and Marony, 2021; Stryker and Serpe, 1982). Social identities have been a large focus of much of the sociological literature on identity due to the obviously social nature of their formation and maintenance. However, it is worth noting that all forms of identity are social in so far as they are formed and maintained with respect to feedback from the social world in which an individual or collective engages.

We navigate our multiple identities through salience hierarchies, which situate our competing identities in order of our commitment to them (Stryker, 2008). Commitment to any given identity may change, though those identities situated high within our salience hierarchies, those which hold 'Master status,' tend to hold relatively static positions (Burke, 2006).

We are motivated to have our identities verified, as this fosters positive emotions (Burke & Stets, 2009) and substantiates our positionality in the social world. Identity verification occurs when others confirm the meanings we have associated with an identity. Master identities like gender generally require greater alignment with associated behavioral expectations (Stryker, 1980). A person's success or

failure in aligning with these expectations— often affirmed through the overt actions of others— plays a crucial role in shaping one's self-identity. This external validation closes the self-verification loop and enriches our understanding of experiences that either confirm or challenge our identities.

Our efforts to feel positive emotions associated with identity verification generally have two consequences: we defend our identities from perceived attacks, and we resist changes to our identities. Identity defense has been studied extensively by scholars interested in social identities, specifically how social identities influence intergroup relations and foster in-group/out-group dynamics (Islam, 2014; Tajfel, 1972,1986). We are likely to come to the defense of those groups that we view ourselves to be a part of, as this helps us verify the corresponding social identity.

Identity change involves multiple dimensions (Carter, 2017). One of the most common dimensions discussed in the literature involves how the self-meanings that define an identity standard are redefined over time (Burke and Stets, 2009). Generally speaking, individuals tend to resist large-scale changes in identity meanings, gravitating towards more subtle shifts over time. Of the three kinds of identities, role identities are the most likely to change over the course of our lives (Carter and Marony, 2021). This is believed to be because role identities usually are not master identities. Another explanation is due to the source of identity change. There are four main sources of identity change: changes in situations, conflicts between competing identities, conflicts between identity standards and behavior, and mutual verification contexts (Burke, 2006). Role identities are predisposed to these sources of identity change, particularly those related to role conflict (Vogel et al., 2014). Situational change is one of the main sources of identity change, which helps explain why identities become activated in times of social change: large scale change undermines identity verification. The efforts that groups or individuals will make to prevent large-scale identity change and its associated emotions could underscore much of the resistance to social changes (Carter and Marony, 2021).

Verifying Identity meaning accomplishes more than simply eliciting positive emotions. Identities and their meanings are an important part of defining and maintaining social structures, norms, and hierarchies. As I will go on to explain, identities also play an important role in justifying dominant ways of interacting with the natural world. In the next section, I will demonstrate how the meanings conferred on masculinities reify power inequalities and inform ongoing resource development. Drawing on ecofeminist scholarship and the work of Raewyn Connell, I demonstrate how masculinities are situated within broader gender hierarchies, intersecting with other identifiers such as Indigeneity and class to secure the hegemony of settler colonialism and unequal gender relations.

Masculinity and Extraction

Ecofeminist scholarship boasts a long history of exploring the relationship between masculine identities and environmentally harmful activities like resource extraction. (Carson, 1962; Merchant, 1980; Plumwood, 1993; MacGregor, 2009; Buckingham, 2010; MacGregor and Seymour eds., 2017). Broadly speaking, ecofeminist scholars have critically assessed dominant Western culture, capitalism, colonialism, and androcentric epistemologies, illustrating how patriarchal structures not only marginalize women and non-White peoples, but also harm the environment (Cudworth, 2005; Gaard, 2001; Haraway, 1988, 2016).

A substantial part of the ecofeminist tradition has sought to examine how the patriarchal histories of science and social power in Western society has shaped contemporary relationships to the non-human world. Feminist critiques have highlighted the predominance of male-centered norms in production and environmental science (Haraway, 1988; Harding, 1991). Tracing how the meanings that surround some masculine identities become normalized, universalized, and used as justification for capitalism, settler-colonialism, and patriarchy is an important part of understanding the current environment crises we are facing.

Plumwood (2018) argues that Western culture alienates itself from nature through life-denying processes, an analytical separation of 'reason' or mankind from 'nature'. This mindset parallels the gender hierarchy that separates masculinity from femininity, creating a similar hierarchical distinction between nature and humanity that facilitates environmental degradation and undervalues the essential role of natural systems in sustaining life. The hierarchy of 'reason' over 'nature'—or masculine over feminine— originates in the societal concept of rationality, tracing its philosophical roots back to Plato (Plumwood, 1993). Rationality has historically been used to justify dominion over others, portrayed as a natural order reserved for those deemed capable of 'reason'—primarily upper-class white men. This perspective classifies everything outside of the narrow boundaries of 'reason' as part of 'nature:' inanimate, devoid of agency, and in need of leadership (Haraway, 1988). Therefore, 'nature' transcends a mere physical category; it represents a political category intertwined with materiality, subsistence, and femininity—elements that have been separated from 'reason' and subordinated. This division is treated as a naturalized truth, with 'nature' viewed as terra nullius, a land over which 'reason' exercises control. Beyond the non-human, 'nature' encompasses oppressed human groups as well, with racism, colonialism, and sexism deriving power from casting sexual, racial, and ethnic differences as signs of inferiority (Plumwood, 1993). Thus, by categorizing something or someone as part of 'nature,' their subjugation is rendered a justified extension of the natural order.

Although 'nature' is subjugated under 'reason,' this dynamic does not necessarily manifest as outright abuse. Instead, the relationship can be paternalistic, where 'reason' ostensibly cares for or protects 'nature,' yet never treats it as an equal (Plumwood,1993). This protection is conditional, whereby 'nature' will only be protected so long as it continues to affirm the hegemony of 'reason.' In some cases, the presumed need that 'nature' has for protection affirms the existence or purpose of 'reason' as the protector. When it comes to conservation, this relationship is readily available, and several scholars have demonstrated how this results in only some places or beings in the non-human

world to be protected, typically those which affirm the identity meanings of wealthy men (Cronon, 1996; Wilson, 1991 [2019]).

This hierarchical valuation of ‘reason’ over ‘nature’ or masculine over feminine can be observed in the labour sector as well, where work that is coded masculine is considered more valuable than feminized care work (Shiva, 1989). Feminized care work, or reproductive labor, encompasses essential activities like cooking and childrearing, which are critical for the ongoing functionality of society (Dorow and Mandizadza 2018). Despite its pivotal role, this type of work is systematically undervalued and often overlooked (Cohen and Huffman 2003), mirroring the treatment of ecosystem services that are similarly classified as part of nature and thus considered inferior to masculinized reason (Plumwood 1993). The undervaluation extends beyond gendered labour, as work performed by non-white individuals is also frequently marginalized and discounted (Cohen & Huffman 2003), highlighting a broader pattern of systemic inequality across different types of essential labor.

Mainstream first and second waves feminism has faced criticism for its failure to address intersectional aspects of domination and power systems, particularly those related to colonialism, ableism, and heteronormativity. Karen Warren (1987) links these power systems to the process of "otherization," which is crucial to the logic of domination inherent in the reason:nature dichotomy. To maintain a position of dominance without being subjugated, extensive identity boundary work is required to define who is associated with ‘reason’ and who is relegated to the category of ‘nature.’

In the Western context, and to some extent globally, white, able-bodied men traditionally hold the privileged status associated with ‘reason,’ a status increasingly recognized thanks to decades of feminist, queer, and racial mobilizing, as well as intersectional organizing by groups spanning multiple identities. Despite this growing awareness, there remains a limited official acknowledgment outside of academia and radical activist circles that ‘reason’ and malestream norms continue to dominate and

shape nearly every aspect of contemporary Western society: from science and policy to economic systems, social norms, and stereotypes. These malestream norms in the West often valorize data and logical problem-solving over emotional approaches, place a high value on techno-optimism and economic rationalism, and emphasize a competitive, winner-takes-all, individualistic worldview (Haraway, 1988; Merchant, 1980).

Despite the important contribution of ecofeminist work to articulating the gendered dimensions of Western society's environmental interactions, the field faced criticisms leveled at feminist movements more broadly throughout the 80s: not all men experienced privileged or influential positions in society (Messerschmidt, 2018). An overrepresentation of white women in the feminist tradition tended to gloss over the importance of identifiers like race and Indigeneity in mediating differences in gendered identities, power, and relationships with the natural environment. Intersectional scholars were vocal about this discrepancy, which made clear the need for a new analytical lens, one that would be better suited to capturing how power is navigated between men across social contexts.

Raewyn Connell's work on hegemonic masculinities and emphasized femininities emerged as a widely applicable framework for thinking about gendered identities and power across scales and contexts (Connell, 1987). For Connell, masculinity is the set of attributes and practices culturally associated with and expected of men, often used to distinguish them from women within the cultural construct of a gender binary (Messerschmidt, 2018). Like all forms of identity, masculinities are socially constructed and arise through daily performances and social interactions (Connell, 2005; Connell and Messerschmidt, 2005). They are contextual and realized through specific patterns of social practice in everyday behaviors and organizational settings, reflecting the unique social contexts in which they occur (Connell, 2001; Connell & Messerschmidt, 2005).

The expressions of masculinity are numerous and hierarchically organized due to their relationship with the social context (Connell, 1995; Connell, 2005; Messerschmidt, 2018). This hierarchy shifts as masculinity adapts across different social settings, leading to variations in which certain forms of masculinity are valued or subjugated (Connell, 2001; Connell & Messerschmidt, 2005). The term "hegemonic masculinity" refers to the dominant form of masculinity in any particular social context, not necessarily the most common, but the one that maintains a privileged position in situated gender relations (Filteau, 2014).

Individuals are motivated to maintain or even improve their status within the gendered hierarchy. Hegemonic masculinity is always constructed in relation to various subordinated masculinities and relations to women (Messerschmidt, 2018: 28). These hierarchal gender relations emerge from historical processes and are not a self-reproducing system (Ibid: 44). This means that gender hegemony requires constant and considerable effort to maintain, though even men who do not consciously seek out hegemony can be complicit and benefit from unequal gender relations (Ibid: 29). Hegemonic masculinities often escape explicit critique, as the way they operate is often disguised in ways that appear natural or obvious, concurrently securing an overwhelming legitimating influence (Ibid: 74).

This concept of multiple masculinities emerged as a counter to the singularity of ‘patriarchy’ (Messerschmidt, 2018). Connell’s groundbreaking work challenged the assumptions of mainstream feminist theory at the time that patriarchy was found across all cultures and conferred privilege on all men over women. Exploring the multitudinous expressions of masculinity illuminated how identifiers such as class or Indigeneity subjugated some men under others. It made the nuanced relationship between masculinity as an identity and broader power structures visible.

Even expressions of masculinity that are not hegemonic are motivated to maintain their status. Perhaps this is the most obvious connection between masculinities and the just transition. As

decarbonization threatens jobs in a male-dominated sector, how does this perceived loss in status impact identities? How could decarbonization be an opportunity to improve the status of marginalized people? And how might resistance to decarbonization policies be related to a desire to maintain one's position in the gender hierarchy?

Indigeneity and Resource Extraction

Decarbonizing the economy is a critical part of addressing the climate crisis; however, without confronting the broader systems of power in which our energy systems are embedded, we risk reproducing the inequities these structures. Of particular note is the entanglement of energy and development with the historical and ongoing legacy of settler colonialism.

Interactions with the natural environment, including how resources are used and to what purpose, are implicated in relations of power and informed by hegemonic knowledge that situates who holds authority to make these decisions (Peets and Watts, 1996). As highlighted in the last section, ecofeminists have argued that only those who are part of the narrow category of 'reason' hold this hegemonic status (Plumwood, 1993). As part of the settler colonial project, Indigenous peoples have been firmly situated in 'nature.' This categorical separation of people from the non-human world is in direct contradiction to many, if not most, Indigenous ontologies, which situate human and non-human interactions as a relationship built on responsibility (Altamirano-Jiménez, 2013: 42). This is not to homogenize Indigenous worldviews but to emphasize that the Western tendency of 'reason' to view the human and non-human worlds as separate is far from a universal perspective.

We must shift our focus from individual experiences of marginalization among women to a broader understanding of how gender as a system influences and structures power relations (Gaard, 2015: 22). These power relations go beyond the oppression of women by men, playing an instrumental role in the colonization of Indigenous peoples and land (Morgensen, 2015). Masculinities, then, are not

exclusively gendered identities; they also shape the broader politics of development. Neither is colonialism removed from gendered hierarchies. Instead, the imposition of colonial masculinities through the project of colonialism mobilizes heteropatriarchy to obtain and maintain colonial control.

Colonial masculinity is a historically contingent and ongoing gender formation that is intimately linked to the violent creation and maintenance of colonial states (Morgensen 2015; Smith, 2021). It is not comprehensive of all masculinities, nor is it exclusive to white, straight, cisgender, male colonizers. Instead, it is both an identity that becomes embodied and a logic that shapes the contours of power relations, operating to maintain its hegemony.

Colonial masculinities are informed by a binary, mutually exclusive understanding of gender that situates masculinity and femininity as opposites. The heteropatriarchal system situates masculinity over femininity, ranking expressions of gender from those most masculine at the top and identity expressions most feminine at the bottom. The hierarchical structure between male and female gender categories is part of the colonial legacy (Prianti, 2019). This colonial understanding of gender posits that masculinity can be lost and must, therefore, be defended (Morgensen, 2015). For colonial masculinity to establish its supremacy, it needed to be crafted anew. European expressions of masculinity, upon arriving on Indigenous territories, underwent transformation through engagement in colonial aggression and subsequently solidified as mechanisms of settler governance (Morgenson, 2015). The reciprocal gender dynamics prevalent among Indigenous communities challenge the established norms of heteropatriarchal authority (Sneider, 2015).

Describing practices of occupation, imprisonment, and policing as "education" reveals how governance strategies aimed to instruct Indigenous populations to become self-regulating subordinates under colonial domination. Indigenous or racialized individuals may have embraced, modified, or

conformed to colonial masculinity because of colonial educational systems or as strategies to cope with racism and colonization (Hokowhitu, 2015).

Indigenous and feminist scholars advocate for a shift away from narratives that pathologize, individualize, and portray Indigenous peoples as victims (e.g., Arvin et al. 2013; Holmes et al. 2015). However, examining the integration of colonial masculinity into whiteness, white settler nationalism, and imperialism can provide strategies for combating white supremacy and the dominance of white settler and imperial governance from anti-colonial and anti-heteropatriarchal perspectives (Morgensen, 2015). Likewise, understanding the ways in which colonial masculinity is imposed on Indigenous peoples and the ways in which communities resist colonial logics of development is critical in establishing an anti-colonial future for Indigenous peoples. It is likewise important to mapping these processes to ensure a truly just transition.

Questions and Objectives

Unlike that of the Canadian government, my interpretation of a just transition extends beyond securing employment for workers. While the availability of good jobs certainly plays a vital role in just futures, I see them as a stepping stone to broader social change. I am motivated by the need to find work that does not require environmental degradation or coerced development projects.

I approach the energy transition and the climate crisis with an emphasis on materiality. I view resource extraction as an unavoidable part of both fossil fuel energies and renewable technologies. I therefore situate my inquiries in the broader category of natural resource extraction because it allows me to confront the systems of extraction and relationships of development with energy more holistically than if I were to focus exclusively on fossil fuel extraction.

This dissertation begins by examining the meanings of masculinity that emerge around natural resource extraction. In so doing, it recognizes the racial, gendered, and colonial narratives that support these extractive archetypes. It then seeks to explore paths towards a just transition that emerge once the power of these archetypes has been acknowledged. In other words, now that we have identified that these identities exist and that they, like all identities, work to resist change and secure their own reproduction, what does that tell us about moving toward a just transition? My interest lies in going beyond further diagnosing what is 'wrong' with these identities or pathologizing the way they move through the world to establishing pathways from these identities to decarbonization.

This research complicates our understanding of the role that identities play in navigating the path to a just transition. It resists structural arguments about what different demographic collectives think or what they want to recenter an understanding of identities that acknowledges their dynamic and social nature. It emphasizes the instrumental nature of identities while highlighting how identities are not always antagonistic to societal changes. The three questions guiding this work include: 1) What relationship does identity have to either resistance against or support for transition? 2) What role does livelihood play in identity? 3) How might we mobilize the values expressed by extraction workers to support, rather than resist, transition?

Methodology and positionality

I will use this as an opportunity to situate the methods into the broader theoretical approach of this dissertation. I also take up the call of Liboiron (2021) to think about methodology as “a way of being in the world,” and as they argue, those “ways of being are tied up in obligation” (1). Thus, I situate myself as a settler scholar within this space, outlining how my own positionality informs this work and my efforts to incorporate reflexivity.

Chapter 2: Theoretical bot detection

Relative to the scholarship on the impacts of resource extraction on the environment, women, and Indigenous peoples, less work has been done on the identities of those who work in resource extraction. There has been growing momentum in the last decade to reconcile this gap. Theoretical concepts have emerged around these connections between the environment, resource extraction, and masculinities, including ecomodern masculinity (Hultman and Anshelm, 2017; Dockstader & Bell, 2020; Hultman, 2013), frontier masculinity (Miller, 2004; Williams, 2021), and petro-masculinity (Daggett, 2018; Allen, 2022). Other work has taken a less explicit focus on masculinities to studies on resource extraction workers lifestyles and gender relations more broadly (Alook et al., 2021; Dorow, 2015; Dorow and Mandizadza, 2018; Lajoie-O'Malley, 2023; Mazer, 2022; O'Shaughnessy and Doğu, 2018).

The work of Chapter 2 emerges from data collected as part of an X (formerly Twitter) analysis published in Letourneau et al. (2023), contributing to the growing scholarship on fossil fuel worker identities. The original project involved generating a sample of 179 X (formerly Twitter) accounts of Alberta-based, self-identified oil and gas workers. The sample was collected manually by scrolling the followers of "hub" accounts representing organizational interests, such as @EnergyCitizens.

Though this data informs Chapter 2, the work in Chapter 2 is entirely theoretical. The original intention of Chapter 2 had been to identify how many fossil fuel worker accounts were bots impersonating real people. As I sought to establish this likelihood, I discovered the major discrepancy between the pervasiveness of bot accounts on social media and existing tools for detecting those bots. The potential for bots to influence politically salient issues while remaining undetected presents a huge liability, which has been increasingly recognized following the American election of President Donald Trump in 2016 (Bessi & Ferrara, 2016). Upon realizing that identifying accounts as bots with any real

certainty was extremely unlikely, I turned my attention to considering what kinds of identities programmers are more likely to program bots as if their intention is to sway discourses on key issues.

I engage the reader in a thought experiment of how bots can co-opt the identity processes of instrumental identities like fossil fuel workers to sway public opinion on contested issues. I do so by describing the various in-group and out-group identity processes relevant to fossil fuel workers. This paper serves as a cautionary tale not only to activists interested in understanding how social media sways public opinion but also to other qualitative researchers who may turn to social media for their research. This is not to say that the possibility of bot impersonation cancels out the usefulness of social media analysis; rather, it simply highlights another methodological consideration for these research approaches.

Chapter 3: Fossil Fuel Worker Interviews

Chapters 3 and 4 employ interviews to more intimately engage in the identity processes of natural resource extraction workers in light of the forthcoming sustainable transition. Chapter 2 focuses on Albertan fossil fuel workers.

A growing body of scholarship studies fossil fuels workers, particularly those in the Albertan oil and gas industry (e.g. Alook, 2016; Dorow, 2015; Mazer, 2019; Muzzerall, 2022; O'Shaughnessy & Doğu, 2018; Spady, 2019; Spady, 2020). Much of this scholarship has acknowledged the gender and colonial dimensions involved in reproducing sites of extraction. However, little of this work, to my understanding, has been done by people who have themselves worked in resource extraction. While this is far from a necessary experience to do good scholarship on any social group—indeed the scholarship I have cited all provide thoughtful contributions to the discussion—I do think it highlights how those who work in extraction seem to fascinate outsiders. Why do scholars from across Canada and beyond the country's borders study Albertan oil and gas workers? While I do not have a clear answer to this question, my

interest in conducting interviews with fossil fuel workers from Alberta stems in part from a desire to provide an insider's look into the identities of those who work in the industry. I knew disclosing my work experience in interviews with fossil fuel workers would shape the interview conversation (Merriam et al., 2001). I also knew I could lean on my social networks from working in the sector to engage participants who might otherwise be reluctant to participate in a university study.

Though calls for a just transition have situated the fate of fossil fuel workers front and center in climate discussions, my personal observation has been that this has not necessarily translated into compassion for workers from climate change advocates. Though it has been popular to echo the labour-focused goals of the just transition within climate action circles in Canada,[1] these more abstract ambitions appear at times disconnected from real relationships with fossil fuel-dependent communities and their economic anxieties. Instead, I observe increasing frustration between predominantly urban Canadians concerned about climate change and rural, resource extraction-based communities. This is not to suggest that the split between climate concern and climate denial boils down to a rural or urban locale but having been raised in rural Alberta, I am sensitive to the subtle and multitudinous ways that resentment towards the lifestyles that emerge in the extractive context are enacted in everyday discourse by many of my peers. From offhand comments about the 'kinds of people' who drive lifted pickup trucks to more direct criticism leveled at rural residents who are disproportionately seen as voting for right-leaning, climate-obstructing politicians (Mildenberger et al., 2016), I am left wondering if this anger is really a fruitful place from which to attempt to secure support for a transition.

I approached my interviews with fossil fuel workers from a place of compassion to counter this polarizing discourse. I draw from identity scholarship in my analysis because it allows me to better

[1] Organizations such as the Pembina Institute and 350.org, have all run campaigns centered around labor and a just transition

emphasize how discourses activate identities in ways that exacerbate resistance to transition. I acknowledge my closeness to the topic, shaping my compassion towards fossil fuel workers. As a young femme working in the industry, I was embroiled in the hyper-masculine environment from which the industry derives much of its hegemony. But while I experienced this ugly side, I also saw the subtle everyday resistance to it that my male colleagues would enact. Observing this resistance gives me hope that there is fertile ground for workers to support transitions if we can meet workers where they are and work towards just futures together. I believe the first step towards this is trust, which I felt positioned to work on establishing.

I am deeply reflective of the fact that my whiteness shapes both my experience working in the fossil fuel sector and the subsequent emotions that arise when I think about resource extraction workers. Having grown up surrounded by and benefiting from the normalization of resource extraction and the lifestyles they support, I have been socialized to view the emergent identities as an insider, sympathetic to their struggles. As a result, I am cognizant that I do not allow this compassion I have for workers to supplant the need to hold them and myself accountable as settlers in so-called Canada. To once again draw on the work of Max Liboiron (2021), “methodologies are always already part of Land relations and thus are a key site on which to enact good relations” (7). I believe there is a productive space in which this compassion and accountability can be balanced, with the result that trust can be built with fossil fuel workers to begin having meaningful conversations about what it means to exist as settlers in this place and what responsibilities are correlated with that. I am not suggesting that this balance is something achieved in Chapter 3—it is not. Rather, I see this work as the first of many efforts to build solidarity to move beyond blame and defensiveness to accountability (see brown, 2020 on transformative justice).

I first relied on my personal networks from working in the industry to solicit participants. I sent my recruitment poster to several of my past colleagues and asked them to share it with their co-workers. While many people were interested in my research project, most were reluctant to participate because they were worried about professional repercussions if their participation was discovered. I only recruited 4 participants this way.

I posted my recruitment poster on physical community boards across central Alberta and in the Edmonton area. I then posted it on the Reddit pages r/Edmonton, r/Calgary, and r/Alberta and ran paid Facebook and Instagram ads with it. The Facebook ads generated the greatest interest. Of 59 individuals who filled out the initial intake form, 29 followed through with interviews.

The criteria for participation was that participants identified as an "Albertan oil and gas worker." This broad criteria for inclusion was used to ensure a wide representation of individuals who worked in the industry and who would, in various ways, be impacted by the proposed just transition policies. Respondents included fieldworkers, who spend most of their working hours outdoors or in industrial shops constructing and operating equipment and infrastructure like pipelines, and engineers and office workers who are more involved with the institutional management and design of oil and gas companies.

Sixteen of the participants were employed as fieldworkers, with the majority either employed or trained in a skilled trade like electrician or pipefitter, and four who were in field-level management (e.g. gas plant operators). Of these sixteen fieldworkers, three had university degrees in addition to their trade certifications. The remaining thirteen participants were office workers, eleven of whom had university degrees. Seven participants identified as women. Only two participants identified as visible minorities in the industry, both of whom were office workers. Two fieldworkers self-identified as Métis.

15 interviews took place over the phone, 10 were done via video conferencing software (Zoom or Teams), and 5 took place in person. Interviews were recorded and transcribed. I used NVivo software

to code the interviews. I began with open coding and coded indiscriminately for what came up in the interviews. This gave me a clearer sense of what themes emerged in the interviews. Next, I did a second pass of thematic coding to verify what came up in the first pass. I then consolidated the codes into broader themes, which inform the analysis in chapter 3.

Chapter 4: Tłı̨chǫ Miners and Families Interviews

My second set of interviews, comprising Chapter 4 of this dissertation, were conducted in partnership with Tłı̨chǫ citizens as one of three case studies in a broader research project, *Advancing Impact Assessment For Canada's Socio-Ecological Systems.* This project sought to contribute a social science and humanities lens to impact assessment processes, following the implementation of the federal Impact Assessment Act (August 2019).

The focus of the broader project guided early conversations with the Tłı̨chǫ about the focus of our work together. The research team[2] met with employees of *Dedats'eetsaa: Tłı̨chǫ Research and Training Institute,* a branch of the Tłı̨chǫ government, several times virtually and held one in-person meeting to discuss the project and establish its goals prior to starting research. This collaborative approach was taken to ensure that the research we conducted aligned with the community's needs. Following several iterations and collaborative discussions, we settled on the following as the purpose of this case study: "Engage in research in partnership with Tłı̨chǫ communities to identify and articulate the multiple forms of social impact associated with past mining activities and potential future industrial development, and how they intersect with climate change, including in particular impacts to family and community relations, sustenance and livelihood activities, and future outlook." My interest as an individual researcher was nested within this broader project and focused on how mine workers and their

[2] Debra Davidson (Ph.D.), Angeline Letourneau, Lucas Schmaus (M.Sc)

families were dealing with the forthcoming closure of the mines, a topic also established as relevant to the community's needs.

Interviews were conducted over the course of two field visits. The first was a five-week trip to Yellowknife from November to December 2022. Nine interviews were conducted in Yellowknife and Behchokǫ̀ during this time. These interviews were conducted with people identified by *Dedats'eetsaa* as having experience or knowledge of the Tłı̨chǫ's participation in past impact assessments or the negotiation of the Tłı̨chǫ land claim. Most of these participants were either employees of the Tłı̨chǫ government or Tłı̨chǫ Elders. Some of the employees were not Tłı̨chǫ, but due to the professional responsibilities of their roles, they were able to provide useful insight into how the Tłı̨chǫ navigated resource extraction. Interviewing employees first allowed us to establish an understanding of the technical aspects of resource development at the governance level, before we conducted interviews with Tłı̨chǫ citizens.

The remaining 45 interviews were conducted over three weeks in May 2023 in the communities of Gamètì, Whatì, and Behchokǫ̀. This comprised a broader sample of Tłı̨chǫ citizens. All people interviewed had some employment relationship with mining. Some participants had worked in the mines themselves, while others had parents, spouses, siblings, or friends who worked in the mines. Those who had never been employed in the mines were split between those who wanted to work in the mines but were unable to get a position and those who observed the impact that working in the mine had on their friends and family and made the conscious choice not to pursue those opportunities. 21 of the 54 participants were women, and participants ranged in age from mid-20s to 80 years old.

Interviews were transcribed by myself and two research assistants, Lucas Schmaus and Claire Neilson. Similar to the analysis done in Chapter 3, I began by open coding all of the interviews in NVivo

and creating a coding tree to establish general themes. I then re-coded the interviews to verify the themes that emerged from the first round.

In between interviews during the first trip, my colleague and I spent time getting familiar with the unique resource development context that exists in the Northwest Territories. One organization comprising part of this institutional milieu that proved particularly relevant to my research interests was the Northwest Territories Geological Survey. Here, we were exposed to the extensive resource mapping that had been done throughout the territory. In particular, the kaleidoscope of colorful maps indicating known deposits of different minerals going right through the center of the Tłı̨chǫ land claim. This visual depiction of the wealth of minerals on their land made one thing abundantly clear to me: if the Tłı̨chǫ choose to take advantage of the rising demand for rare earth minerals, they were positioned to become immensely wealthy off mining.

It is important to resist the binary association of resource development as antagonistic to Indigenous peoples, as this ignores the diverse histories many groups have of engaging with land in a way that may appear from a settler's perspective as similar to Western resource extraction. This binary ignores the relationality that informs how many Indigenous peoples engage with the land in an exchange of reciprocity (Liboiron, 2021). It is worth noting that it is also important to resist homogenizing or essentializing narratives about Indigenous Land relations, as these are unique to each people and their situated cultures and histories. It is from this position that I approach the interviews with Tłı̨chǫ people.

The findings for Chapter 4 are not a final, empirical statement but a mid-point for ongoing discussion with the Tłı̨chǫ about my observations. The findings reflect a moment in my own learning rather than a statement about the universal nature of Tłı̨chǫ identity. Relationality is inherently fluid and context-dependent (Starblanket & Stark, 2018). Therefore I anticipate that my connection with the Tłı̨chǫ will change as we continue our work together. The findings I present have been discussed with research

partners in Dedats'eetsaa, who have verified the observations. While I believe this lends credibility to the findings, I do not perceive this as making them universally true for all people of the Tłı̨chǫ nation.

I recognize the diversity of perspectives within the Tłı̨chǫ nation, and while I have strived to ensure I captured this diversity in participant sampling, several factors were involved which affected this. First and foremost, some community members did not wish to participate in interviews because they were worried about repercussions if they shared what they really thought of the community government's pursuit of mining. This involved me then as not just an observer of Tłı̨chǫ collective identity but a participant in complex inter-group identity processes, whereby myself and my colleague were viewed as instruments of the Tłı̨chǫ government. This meant we were met with suspicion by more than a few citizens, both among those who chose to participate and those who didn't. This shapes the findings of this study.

Secondly, we did not conduct interviews in the community of Wekweètì. Of the four Tłı̨chǫ communities, Wekweètì is the smallest and most remote. It is accessible only by air for most of the year, excluding a few weeks when it can be accessed via a 424km winter road. As a result of its isolation, Wekweètì is considered by many Tłı̨chǫ to be the most traditional of the four communities. The historical Barren ground caribou migration route goes right past the community, making this a critical place for caribou hunting. Wekweètì is also the closest community to the diamond mines, with the Diavik diamond mine only 187km away. As such, Wekweètì citizens exist in a tension between a more traditional lifestyle while observing firsthand the impacts that resource development has on the Land, particularly the caribou herds. Interviews with citizens in Wekweètì are still planned as part of the broader research project, but are not part of this dissertation.

Roadmap

In the first paper, I turn to the emotionally affective space of social media to explore how the identity processes of politically salient identities like fossil fuel workers can become co-opted by vested interests to drive public discourse on the energy transition. Specifically, I turn to advancements in bots on social media in recent years, and highlight how our ability to identify bots and track their influence is lagging their sophistication. Through the example of fossil fuel workers and their relevance to the energy transition, I demonstrate that there are certain identity groups that are more instrumental for bots to mimic in order to sway public perceptions. This first paper has two central contributions. First, it advances an approach to bot detection. Secondly, this paper presents a cautionary tale. This caution applies to two different groups: academic researchers and activists. For researchers, this paper demonstrates the likelihood that many of the participants and interactions observed on social media platforms are not real people, but may actually be politically motivated bots. For activists, this paper seeks to uncover the potency of bot interventions to sway public perceptions of key issues, like whether or not a just transition is a good idea.

In the second paper, I turn explicitly to the identities of oil and gas workers. Through semi-structured interviews with 29 individuals who work in the Alberta oil and gas industry, I explore the role that identity plays in resistance to or support for a just transition. I ask participants directly about masculinity, inviting their interpretations of the concept and its broader impact. I go beyond a descriptive account of their masculinities to highlight that, while their masculine identities are tangled up in their extractive labor, this alone does not prevent their support for a just transition. I argue that class-based gender stereotypes about field level workers are preventing trust among workers that they will be recipients of meaningful assistance through the transition.

In the third paper I turn away from fossil fuel workers to focus explicitly on Indigenous mining workers. Much of the work on masculinities or identities and resource extraction have been approached by focusing on non-Indigenous labour. That work which has engaged with Indigenous peoples tends to focus on Indigenous resistance to resource extraction. While resisting a homogenization of Indigenous experiences, this final paper outlines how the identity of the Tłı̨chǫ people of the NWT positions them to navigate transitions. The Tłı̨chǫ are implicated in two transitions: the closure of the diamond mines they are economically dependent on, and the decarbonization of the economy. The closure of the diamond mines is already in progress. How the Tłı̨chǫ will be implicated in the transition away from fossil fuels is yet to be determined. The Tłı̨chǫ's traditional territory is situated along the Slave geological fault line, a region full of the rare earth minerals (REM) so central to most transition technologies. If they want mining to continue being a part of their future, the Tłı̨chǫ are positioned to participate in the development of REM. Whether or not the community chooses to participate in future mining will depend on their collective visions for their future. Their identities will guide this process.

Chapter 2- Social media and the politics of identity: the influence of non-human actors in the climate crisis

Introduction

Since the American presidential election in 2016, there has been growing awareness about the potential for bots on social media platforms to sway public opinion on major issues. As much as 73% of internet traffic is conducted by malicious bots, those automated, non-human actors deployed to conduct fraudulent activities (Arkose Labs, 2023). While the influence of bots on election outcomes has largely been the focus of this scholarship, what has been less acknowledged is how bots may be intervening in discourses on contentious issues like climate change.

This paper will explore how bots on social media platforms may intervene in identity processes and sway public alignment on key issues. Using the example of fossil fuel workers—a group that has become politically salient in the context of climate action movements—I argue that bots are more likely to mimic fossil fuel worker identities over others. This is because contestations over how fossil fuel workers feel about the transition tend to fall along partisan lines, rendering perceived worker support a politically lucrative topic in the broader discussion of decarbonization. By impersonating fossil fuel workers, bots are well-situated to influence this topic by performing a particular politicized, classed, and gendered identity that engages in the identity processes of real people, both fossil fuel workers and beyond. In this paper, I advance scholarship on bot detection by outlining the characteristics of identity groups that bots are more likely to impersonate and provide a framework delineating the various pathways through which bots influence key issues by intervening in identity processes.

Social media, the facilitating landscape in which bots operate, has rapidly become one of the primary spaces in which politically and socially consequential interactions take place. However, platforms

do not merely reproduce conventional social interactions; they distort them (Ramos, 2020). As social media users, we have become the product of the attention economy, where platforms are designed to be emotionally affective and addictive (Bhargava & Velasquez, 2021). Platforms standardize their user interfaces to automate user data collection, changing how information is presented and constraining how we engage with other users (Van Dijck et al., 2018). Our feeds are governed by abstract selection processes, where what we see is determined by opaque system algorithms (Zulli et al., 2020; Van Dijck et al., 2018). What was promised to be a space of democratic liberation, free from the curation of large media organizations and able to foster a global society (McLuhan, 2011), has become commercialized. This neoliberal, libertarian ecosystem created by corporatized social media platforms profoundly impacts our identities and how we negotiate them (Bastos, 2021).

Identity is our socially defined sense of self. It is multifaceted and ever-shifting, socially informed by various influences throughout our lives (Brekhus, 2020). Identity is a central organizing element of social life. It helps establish social positioning (Campion, 2019) as we construct and narrate ourselves and others into social contexts. We seek to verify and defend our identities because they are responsible for our status and for the meanings we have about ourselves (Stets & Burke, 2014). Because of the instrumental value of identities, an effective method of securing meaningful support for a particular political position is to bind up an individual or group identity with that position.

Though research on social media and identity has grown significantly in recent years, it has yet to robustly acknowledge a seriously complicating factor of the social media environment: not all actors on social media are real. The presence of fake accounts and non-human actors on social media is not necessarily a new phenomenon, but technological advancements have increased the effectiveness with which these actors infiltrate our digital social environments. For example, it is estimated that anywhere between 15% (Varol et al., 2017) to 68% (Ballard, 2022) of X (formerly Twitter) accounts are actually

bots. These non-human actors present a novel disruption to how we conceptualize ourselves and the people around us both in and beyond digital social spaces.

Since the emergence of social media platforms, there have been bots. Their sophistication has grown significantly, particularly as generative AI has become more accessible. As their sophistication improves and bots can better mimic real people, their capacity to influence society, for better or worse, has also improved. The actions of coordinated botnets— groups of bots programmed to work in tandem—have been linked to the outcomes of numerous elections (ex. Bastos & Mercea, 2017; Bessi & Ferrara, 2016; Ferrara, 2017) and the spread of misinformation (Daume et al., 2023; Greve et al., 2022; Shao et al., 2018). However, despite their profound impact on society, advancements in botnet sophistication outpace methods of detecting them, engaging platform operators and researchers in a game of cat-and-mouse where botnets frequently go undiscovered until they reach a level of influence with more significant consequences.

The same motivations that compel us to verify and defend our identities also inform how we respond to and engage with bots. When we are faced with a perspective that challenges our identities, regardless of whether that originates from a bot or a real person, we are still likely to engage in identity defense. Therefore, bots can exploit our identity processes to influence key issues. But to do so effectively, they must perform as an identity that relevant to the issue that the bot is attempting to intervene in. Sophisticated bots perform politically salient identities to increase their efficacy in influencing their target audience.

In the context of climate action and the requisite energy transition, fossil fuel workers have become one such group of politically salient identities. Fossil fuel workers represent about 0.7% of employment in the U.S. (Baker and Lee, 2021) and 0.9% in Canada (Statistics Canada, 2023). Despite being such a small proportion of the workforce, the impacts of decarbonization on fossil fuel workers

have been a central talking point in the phase-out of fossil fuels. Defenders of the industry criticize the impacts an energy transition will have on fossil fuel workers (Jaremko, 2022). Meanwhile, initiatives such as the just transition (Harris and McCarthy, 2023; Henry et al., 2020) and the Green New Deal (Boyle et al., 2021) place explicit focus on limiting the effects that an energy transition will have on labor groups dependent on fossil fuel extraction and processing. The resulting partisan divide over how fossil fuel workers feel about the energy transition becomes a politically lucrative topic in the broader discussion of decarbonization, one in which bots are well situated to influence by impersonating workers.

Despite the very real consequences of bots and their co-opting of identities, little theoretical work has addressed bots and identities. This paper seeks to address this gap, providing a theoretical framework for how bots manipulate identity processes to influence key issues (Daume et al., 2023). Specifically, I offer a theoretical approach to examine the likely influence of bot accounts on climate change and energy transition discourses through the mimicry of fossil fuel workers. This paper moves beyond the scholarship that measures the political effects of bots and turns instead to outlining how bots are so effective at shaping our social world.

Identity

Identity is a central organizing element of social life. We use identity to construct meanings, classify groups and individuals, and narrate ourselves into existing social networks and cultural contexts (Brekhus, 2020). The social groups we hold membership in greatly influence our identity (Bourdieu, 1986; Tajfel & Turner, 1986). Group membership grants a sense of belonging, security, and self-esteem, maintained by the ascription to a common set of values and beliefs (Burke and Stets, 2009). The commitment we have to our in-groups is matched with a distancing or “Othering” of members of out-groups (Islam, 2014; Tajfel and Turner, 1986). We tend to have a positivity bias for our in-groups and an exaggerated understanding of differences between our in-groups and out-groups. Some group

memberships are ascribed, such as race or gender, while others are voluntarily entered, like religion or sports (Carter and Mahony, 2021). Some identities are marked, whereby they are framed as socially specialized, while unmarked identities are taken for granted as socially generic and universalized (Brekhus, 2015). Many marked roles or groups an individual is part of hold 'Master Status,' and have a disproportionate effect on identity over others (Hughes, 1945).

The relevance or salience of our different group memberships is not static but situational. Individuals manage multiple competing identities that draw varying degrees of social value and cultural attention from others that change over time and across contexts (Brekhus and Ignatow, 2019; Stryker, 2008). For example, being a bandwagon sports team fan may only be salient when you attend a game against your hometown team's rival. Likewise, you may not particularly care that your co-worker is a devoted fan of your hometown team's rival until they give you a hard time about beating your team in the finals, raising the salience of your membership as a fan, and making you feel defensive.

Information and how it is framed plays an important role in identity formation and maintenance. People use the information available to them to understand the world, their place within it, and construct practical, cognitive strategies to cope with it (Swidler, 1986). We are much less likely to challenge the accuracy of information shared by those we perceive as part of our in-group (Jun et al., 2017). We are equally likely to reject information that conflicts with our pre-existing perceptions of the world and our identities, demonstrating a preference for information that validates our in-group identities even if that information may not be factually correct (Harel et al., 2020).

Though complicated factors govern how we negotiate our conflicting group loyalties, a large motivation for identity negotiation is instrumental. In social situations, individuals strive to confirm the meanings of or verify their identities to experience positive emotions (Stets and Burke, 2014). As political contexts change, what is relevant and advantageous also changes. Cues from the emerging context can

raise the salience of a particular social identity (Turner et al., 1994) or 'activate' the identity (Carter, 2013: 206). Individuals may politicize and activate—or be forced to politicize—more than one identity (Duncan and Stewart, 2007); however, the degree to which an individual will link political events with their identities— and thus shift their group allegiances based on those events— depends on the personal commitment an individual has to the implicated identity (Stryker, 2008). In other words, some group members will be mobilized by threats to the group more than others. When an identity becomes activated by a threat, the norms associated with that identity guide the response from members (Hornsey, 2008), though what constitutes the norms is regularly contested and subject to change (Posner, 2017). Some groups develop a greater politicized collective identity, whereby "group members (self) consciously engage in a power struggle on behalf of their group" (Simon & Klandermans, 2001, p. 324).

Those identity groups centered in discourses around key social issues are politically salient identities and instrumental to the narratives formed around these issues. For example, migrants are relevant in the context of national immigration policies. In discourses surrounding immigration, the identities of migrants are continually debated, with those resistant to immigration often depicting the identities of migrants very differently from those who are more supportive (Stansfield and Stone, 2018).

The conscious manipulation of how politically salient identities are represented, or "motivated representations," is directed by those with the power and financial means to generate and disseminate cultural texts (hooks, 1997). Over time, these motivated representations turn elite beliefs and values into common sense perceptions (Seiler and Seiler, 2004: 173). These motivated representations are dynamic, as politically salient identity groups engage in a "politics of recognition" to contest how they are represented (Taylor, 1992), forcing a response. The iterative process of negotiating these identities plays a symbolic and critical role in social struggles.

Social media and identity

Literature on social media and identity generally treats social networking sites as a digital landscape through which conventional social interactions occur (Pooley, 2014). Certain web-based qualitative approaches like netnographies which situate "the study of communities and cultures emerging through electronic networks" are a notable exception (De Valck et al., 2009: 197).

Much of the literature on social media and identity aligns with Goffman's theory of performativity and considers how the affordances of different social media platforms shape how we strategically express ourselves (Davidson and Joinson, 2021; Goehring, 2019; Khazraee and Novak, 2018; Letourneau et al., 2023). This approach focuses on how people form expectations regarding potential audiences who may view their account and adapt their communication accordingly (French & Bazarova, 2017). For example, when creating an account, users purposefully choose the specific elements or phrases they want to represent themselves with, engaging in intentional moments of identity reflexivity (ie. Brubaker and Cooper, 2000).

While moments of deliberate identity performance have been a major focus of much of the scholarship on identity and social media, these moments of reflexivity—beyond profile curation— are a narrow representation of how people actually use social media. Instead, most social media platforms facilitate fast-paced, emotionally affective interactions that keep users on sites longer and thus generate more advertising revenue (Van Dijck et al., 2018). Platform algorithms reinforce in-groups, artificially prioritizing sensationalist and emotional content in individuals' feeds thereby forming echo chambers, triggering identity responses, and facilitating emotionally charged engagements (Bastos, 2021; Cinelli et al., 2021).

Regarding the internet as 'place', I conceptualize social media as a subsection of society. On the one hand, it is a somewhat artificial social space. We are constrained in how we interact with each other

on the platform by the affordances of the platform (Humphreys, 2018). Algorithms are designed to increase the time we spend on platforms, which is accomplished by showing us emotionally evocative content that we are more likely to engage with. On the other hand, while affordances may constrain us compared with face-to-face interactions, our social media behavior still reflects conventionally understood identity processes. So, while social media is a unique social context from which to examine social interactions, social media is still subject to the same identity processes we expect to see online, just carried out at different temporalities and through affordances. Social media dramatically changes the pace at which identity processes occur compared with in-person interaction. What was once a complex, lifetime process of reflexivity to negotiate identity is now done in the space of temporary, fast-paced social media, designed to exacerbate group differences (Barassi and Zamponi, 2020).

Bots and Identities

Bots are not new: they have been around for longer than many social media platforms currently dominating our digital social world. However, what has evolved drastically in recent years is their sophistication, allowing them to better integrate into human social networks, increasing their capacity to influence broader social and political issues, and evade detection (Grimme et al., 2017; Yan et al., 2021).

Social bots are programs that "automatically produce content and interact with humans on social media" (Ferrara et al., 2016: 96). Though they are employed for a wide range of purposes, fake profiles like those of social bots generally have one of four main intents: 1) to change the actions of an individual or group; 2) to change the perceptions of an individual or group; 3) to hide the malicious activity of an individual or group (ex. Cyberbullying); 4) to spread malware (Van der Walt & Eloff, 2018). Bots range in their ability to successfully pursue these intents, and a large part of their effectiveness rests in how convincingly bots pretend to be real people.

Social bots can generally be divided into three sub-classes: simple, advanced, and "intelligent" social bots (Assenmacher et al., 2020; Grimme et al., 2017). Simple bots are governed by a basic source code and are limited to posting, sharing, or liking content. Simple bots are the easiest class of social bots to create and detect due to their low level of sophistication. They often perform tasks in a manner that a normal human user cannot replicate, such as posting large amounts of content in short succession, and their distinctly computerized behavior is often a key characteristic in their detection by platforms. The second class of advanced bots can better mimic human behavior (Hegelich & Janetzko, 2016), performing a wider range of tasks at a speed similar to that of a real human, mimicking the inactivity of a real user, and simulating multiple interests in a form of window dressing. The third class of "intelligent" bots are the least understood, with a capacity for generative engagement that makes them virtually indistinguishable from human users. Both advanced and intelligent bots convincingly perform as a real human and can be difficult, if not impossible, for the average human user to identify as a bot.

Sophisticated social bots engage in three distinctive behavioral patterns that make them successful at integrating within social networks (Hegelich & Janetzko, 2016). The first is mimicry, where they replicate what a real human user's account might look like. This mimicry can take many different forms based on the identity that the social bot is attempting to perform. The second behavioural marker is window dressing, where bots attempt to appeal to target human users by promoting topics and using hashtags. The third behaviour is reverberation, where bots retweet or share content from other accounts to engage human users and integrate into their social networks.

With the exception of chatbots, most bot accounts do not operate individually. Rather, like any social group, their power rests in their numbers and ability to coordinate across networks. Through the coordinated efforts of "botnets," social bots can do everything human users do to influence social discourses but faster, at a larger scale, and at a lower cost than using real, human-operated accounts

(Yan et al., 2021). The more advanced or intelligent the bots, the more of an effect their botnets can have.

Increasingly in the spotlight is the ability of botnets to sway public discourses on key issues to the degree that it has a measurable political effect. Political bots impersonate political actors and interact with human users, aiming to influence public opinion (Yan et al., 2021). Political bots are primarily created to promote a specific party or candidate, creating fake backing and popularity in the form of digital astroturfing (see Kovic et al., 2018). The effectiveness of political bots is familiar to many in Western democracies, having been directly linked to the MacronLeaks misinformation campaign in the 2016 French elections (Ferrara, 2017), hyperpartisan news leading up to the Brexit referendum (Bastos & Mercea, 2017), and discourses surrounding the 2016 U.S. Presidential election (Bessi & Ferrara, 2016). Despite this measurable impact that bots have on our social and political systems, approaches to detecting bots still lag behind the advancement of these technologies.

The bot detection problem

While the average human user may be able to identify simple bots, advanced and intelligent bots are much more difficult due to their convincing performance of a real person in digital spaces (Yan et al., 2021). Computational methods have allowed researchers to overcome some of the observational limitations for identifying more sophisticated bots. Indicators such as network complexity, whereby an account from a real person would be expected to have a predictable measure of spontaneity in their social network that many bots are not programmed to replicate, have provided clues for bot detection. However, much in the same way that cybersecurity advances slightly behind the innovation of hackers, bot detection approaches likewise lag behind bot programming (Iliou et al., 2019).

Part of the problem lies in the lack of access to platform information necessary to comprehensively study bots (Gorwa & Guilbeault, 2020). Prior to its takeover by Elon Musk, X (formerly

Twitter) was the only major social media platform that had an open application operating interface (API) that allowed researchers easy access to platform data. Because of this, X is overrepresented in research on social media, with significantly less known about bots on other platforms. Now even X is no longer openly accessible to researchers, limiting the amount of research that will be possible moving forward. This change in the availability of data from X also overlaps with rapid increases in the accessibility of Generative-AI, limiting the amount of research being done despite the significant implications for the sophistication of bots in the last year.

Though the lack of researcher access to platform data is a major barrier to bot detection, the real ambiguities emerge from the "ground truth" problem: even the most advanced bot detection methods we currently have lean heavily on human coders' ability to identify bot accounts successfully (Subrahmanian et al., 2016). Given that humans are not particularly good at detecting bot accounts (Edwards et al., 2014), this presents some significant gaps in our bot detection toolkit. Even social media platforms themselves struggle with bot detection, partially due to the massive scale on which they function (Gorwa and Guilbeault, 2020; Van Dijck et al., 2018), but also due to their hesitancy to acknowledge the full scale of the issue. The business models of most major platforms rely on advertising revenue, where companies pay for advertising campaigns based on the assumption that a certain number of real people are seeing the advertisements (Zulli et al., 2020). If it is discovered that a significant portion of those views are from bot accounts, it could severely undermine the business model that depends on advertising revenue.

While bots undoubtedly disrupt our social and political systems, our ability to quantitatively pinpoint their influence in discourse and the resulting real-world consequences is limited (Daume et al., 2023). Bass and Ferrara (2016) identify a measurable effect on online discourses around the 2016 US election, while Bail et al. (2020) could not link social media manipulation attempts to actual voter

behavior. Linking the manipulation of online discourses to one specific actor is even more difficult, as potentially helpful indicators like IP addresses can be easily falsified by careful, determined operators (Gorwa and Guilbeault, 2020).

Though advancements in bot detection are important to curbing the impact bots have on the integrity of political systems, improved abilities by programmers to detect bots are unlikely to change how the general public interacts with bots. Motivated reasoning interferes with our ability (and willingness) to critically discern which users are real and which are bots (Yan et al., 2021). Because we are motivated to verify our identities (Carter and Marony, 2021), we are motivated to believe those users who help us do so are real or, at the very least, motivated to ignore the inconvenient fact that they may not be real people. Individuals use the same social rules when interacting with computers as they would when interacting with people (Kim & Sundar, 2012), often ignoring the cues that signal the non-human nature of a computer (Nass & Moon, 2000). This presents a serious risk if botnets are employed to engage with users online, as it is likely people will engage with bots as though they are real people, with broader political consequences.

In an experiment, Bail et al. (2018) found that, despite being informed that they were interacting with bots designed to mimic partisan personas, users carried these experiences with them into their lived interactions, becoming less trusting of members of the opposite political party. In other words, interacting with political bots engages us in identity verification regardless of whether or not we know they are a bot. This suggests that simply focusing efforts on the technical challenge of detecting bots fails to address the broader social mechanisms that motivate our engagements with bots.

Daume et al. (2023) suggest two methodological approaches that can be used to overcome these challenges in identifying bots and their effects: triangulating data sources such as interviews and surveys with digital profiles of respondents (e.g. Bail, 2022), or through theoretical approaches (e.g. Ross

et al., 2019) that explore the likely influence of bot accounts. In the next section, I follow the second suggestion and offer a theoretical approach to examine how bots could be influencing climate change and energy transition discourses through the mimicry of fossil fuel workers.

A theoretical framework for bot identity interventions

In the following section, I offer a framework (Figure 1) for how bot accounts programmed by motivated political actors intervene in identity processes by mimicking politically salient identity groups. As I will outline below, there are three main characteristics of a politically salient identity that make it more instrumental for shaping discourses on a key issue over other identities. I then clarify the three main avenues through which social bots intervene in identity processes: allies/in-group, out-group/opponents, and out-group/broader public.

While this paper does not include empirical evidence, the framework was inspired by empirical analysis of fossil fuel workers' X (formerly Twitter) accounts covered in Letourneau et al. (2023). The framework is not designed to identify sites where we can say with absolute certainty that bots are intervening; rather, it pinpoints spaces of particularly emotive identity processes, drawing attention to those identity interactions most readily exploited by bots. I use the example of fossil fuel workers in the context of the energy transition to demonstrate how certain identities are more instrumental in influencing key issues and, therefore, are more likely to be impersonated by bots. In the next section, I provide a brief introduction to fossil fuel workers and the energy transition debate, before moving into the details of the theoretical framework for bot detection.

Fossil fuel workers and the energy transition

Fossil fuel workers have gained increasing political salience in climate politics. They represent a key workforce for the transition away from fossil fuels and a central component of the capitalist system that

relies on cheap fossil fuels. Their work also embodies characteristics of industrial and frontier masculinity, which holds symbolic capital, particularly for the political right (Hultman and Pule, 2018; Pulé and Hultman, 2019; Vowels and Hultman, 2022).

Fossil fuel workers have been a politically salient group in varied discussions around the social dimensions of the sector since before decarbonization became a mainstream political issue. Like other natural resource occupations that align with a rural, frontier masculinity, fossil fuels are deeply entangled with identities and ways of life (Filteau, 2014). While certainly not every fossil fuel worker identifies as a man, the coded norms and behavioral expectations of the role enforce a caricature familiar in many other male-dominated, natural resource-based occupations, even among female employees: a rugged, self-sufficient, hardworking, masculine provider (Miller, 2004).

These familiar caricatures, reminiscent of many heroes and personalities of the North American canon like Paul Bunyon or the Lone Ranger, load their contemporaries in resource-based industries with cultural capital, making the connection between fossil fuel labor and masculinity one not easily disentangled (Filteau, 2014; Williams, 2021). The deep immersion of fossil fuels in Western economies has facilitated not only direct material benefits to the predominantly male financial and occupational sectors associated with fossil fuels, it has also spawned lifestyles and identities that are themselves highly gendered and racialized (Krange et al., 2019; Krange et al., 2021; Moreno-Soldevila, 2021; Pulé and Hultman, 2019).

These connections—described as petromasculinity by Daggett (2018)—have played a central role in perpetuating the dependency of Western socioeconomic systems on fossil fuels, as masculine identities strongly associated with fossil fuel production and consumption attempt to maintain their hegemony (e.g., Bell and Braun, 2010; Bell and York, 2010; Bell et al., 2020; Daggett, 2018, 2019; Hultman & Anshelm, 2017; Scott, 2010). Hegemonic masculinities seek to legitimate a system of unequal

gender relations between men over women, and of some men over others (Connell & Messerschmidt, 2005; Messerschmidt, 2019). Considering the strong relationship between fossil fuel reliance, masculinity, and white male dominance, phasing out fossil fuels could be seen as nothing short of a crisis to those for whom fossil fuels have become integral to their identity and position in the social order.

Special interest groups like fossil fuel workers with highly embodied cultural capital can be especially useful for mobilization by powerful actors, as their unconsciously acquired yet obvious skillsets or mannerisms are likely to be seen as legitimate competence instead of a form of capital (Bourdieau, 1986). Within Western culture, masculine identities—particularly those associated with whiteness—tend to be heavily laden with this symbolic cultural capital (Hultman & Pule, 2018; Miller, 2014), carrying a significant amount of influence over reproducing systems of power because of their intangibility and unmarked status.

Group membership comes with access to group social capital (Bourdieu, 1986). For fossil fuel workers, this social capital is supported by industry. The vested interests of the fossil fuel industry are leveraged by their significant lobbying power to defend the industry which provides these workers with jobs. In exchange, the masculine-coded, politically salient extraction identities uphold the social hierarchies of the resource-dependent colonial framework, thus reifying the position of elites and maintaining the hegemony of fossil capitalism (Williams, 2021).

While census data can inform us of how many people work in fossil fuels, understanding what proportion feel deeply connected to their role identity as fossil fuel workers is a much bigger challenge. But when it comes to the political salience of fossil fuel workers, the self-identities of workers are of less consequence than the ways in which they perceive themselves as belonging to a group, the ways the wider public perceives them, and how these perceptions uphold broader cultural and social narratives about the possibility of the energy transition. In other words, when it comes to the discursive power of

politically salient identities like fossil fuel workers, it is not about what the majority of individuals from that identity group actually believe. Instead, it is about how the rest of society perceives them. It is within these broader societal narratives that there are ample opportunities for misrepresentation by powerful or influential actors to sway public opinion on key issues like the decarbonization of the economy. As the next section will outline, bots offer a powerful means to misrepresent politically salient identities like fossil fuel workers and sway consequential discourses.

For the purposes of developing the theoretical framework, I work with the assumption that bots have been programmed by actors who seek to defend fossil fuel hegemony and resist the energy transition. This assumption is in line with a substantial body of literature that addresses the misinformation (Oreskes and Conway, 2010; Carroll, 2021), astroturfing campaigns (Dunlap, 2013; Dunlap & McCright, 2011), and political manipulation tactics (Goldberg et al., 2020) used by fossil fuel companies and industry supporters to defend the sector. However, it is important to note that, given the accessibility of bot programming, it is entirely possible for bots to be programmed to spread messaging in favor of an energy transition, though little scholarship has demonstrated social movement groups using explicit deception like bots to further their goals.

Characteristics of an instrumental bot identity

While bots can be programmed to mimic any desired identity, there are characteristics that make some identity groups more politically instrumental to mimic than others. I will begin by defining these characteristics below, but as each of these characteristics is invoked differently based on the identity process involved (in-group or out-group), I will speak to those interactions in greater detail in the next section.

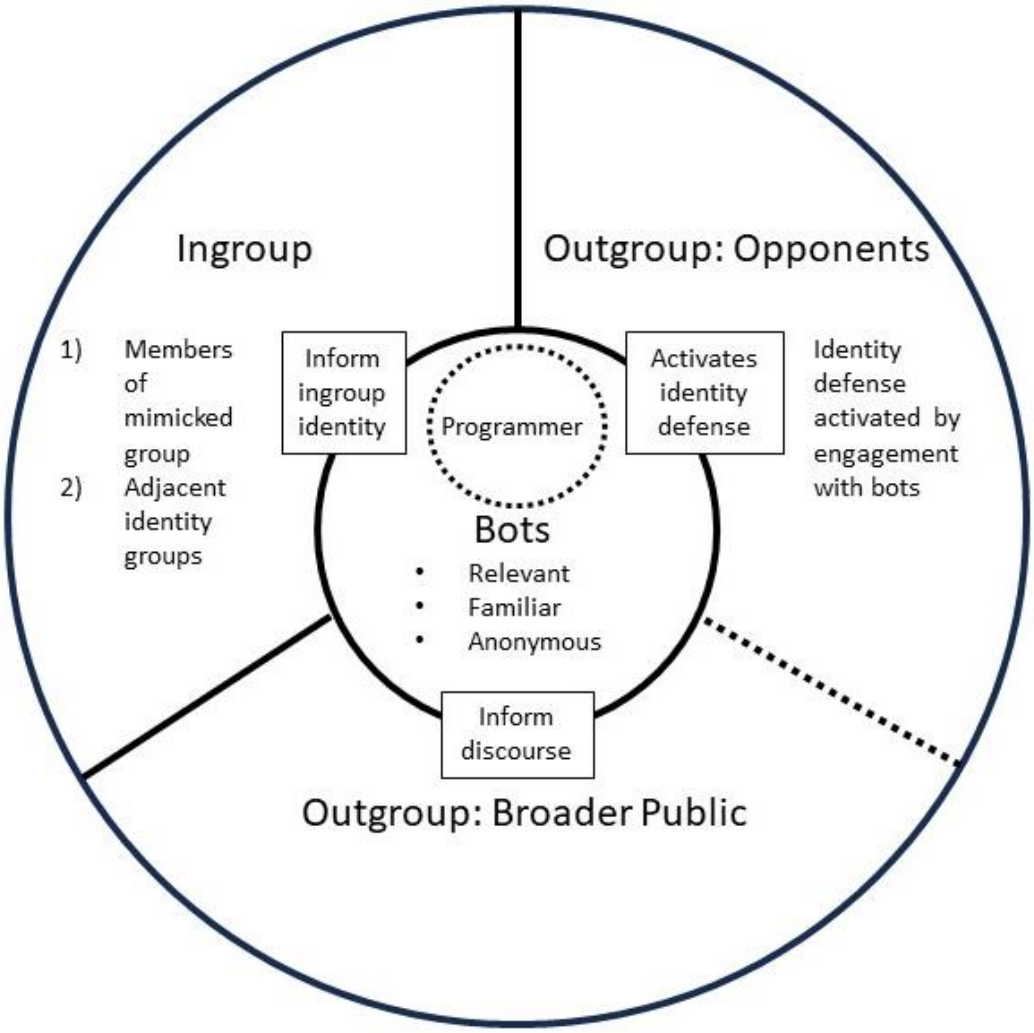

Figure 1: Theoretical framework for an instrumental bot identity

Relevance

The first characteristic is the relevance of the identity to the theme of the targeted discourse. A key factor when we assess the validity of the information we are exposed to is our subjective belief in the authority or positionality of the speaker on that topic (Callison, 2014). In the context of the energy transition, fossil fuel workers are relevant because they will be directly impacted by a transition away

from fossil fuels. Their loyalty to the industry or support for transitioning is an important source of validation for both those who seek to defend fossil fuel energies and those who wish to see an energy transition occur. Those in the former group who seek to maintain fossil hegemony are more likely to draw on the need to defend workers' current jobs in the fossil fuel industry, supporting messaging that implies workers are not interested in transitioning. Those in support of an energy transition may focus instead on emphasizing the reasons why workers want to transition to jobs outside of the fossil fuel sector. For example, they may emphasize issues with safety or the lack of job security in an industry notorious for boom/bust cycles. In either case, the identities of workers (positioned as proud industry supporters versus exploited labourers), and whether or not they support an energy transition, is an important, contested element of transition discourse.

While bots could be programmed to masquerade as other identity groups besides workers, there are few groups with similar impact to the fate of labour in the transition. To that effect, while fossil fuel workers are relevant to the specific topic of workers and transitions, they would likely not be as useful for discourses on other elements of climate action. For example, if motivated actors wanted to promote messaging that implied electric vehicles are less reliable than existing emitting vehicles, fossil fuel worker identities would not be as relevant and would therefore be less instrumental in spreading this messaging. Instead, they may program bots to mimic vehicle mechanics, who would be seen as having expertise on vehicle maintenance or longevity. Therefore, the impact of a politically salient identity group can be determined by a range of factors like the relevance of perspective, as it is for fossil fuel workers and the just energy transition, or professional expertise, as it is for mechanics and electric vehicle reliability.

The relevance of an instrumental bot identity tends to be predetermined in the social discourse. Bots do not need to justify the relevance of fossil fuel workers in the energy transition discourse because

their significance is already widely acknowledged. Because bots influence discourses over time, they could feasibly shift the relevance of certain identities to key issues by sharing messaging that prioritizes a new identity group in a key issue narrative or minimizing the relevance of current relevant identities. So while the relevance of an instrumental identity is important to spreading bot messaging, over time botnets can produce new relevant identities.

Familiarity

The second characteristic of an instrumental bot identity is the familiarity of cultural stereotypes or narratives about the target identity group within the broader public. People rely on dynamic stereotypes and cultural narratives to help them categorize and form assumptions about other identity groups (Bastos, 2021). Though this unconscious bias informs most of our social interactions, the effects are magnified on social media platforms where identity presentation is constrained by platform design (Harel et al., 2020). As a result of these constraints, our expectations for identity performance on social media are reduced: we do not scrutinize digital identities to the same extent we would a physical person (Yan et al., 2021). Because we rely heavily on stereotypes about other groups to fill in these digital identities and have become accustomed to incomplete information presented about other users, bots that are performing an identity group with strong stereotype associations do not have to do as much to convincingly mimic the target identity group as they would for a more obscure identity. The more familiar an identity group is within the wider cultural discourse and the more consistent stereotypes around that group are, the less work bots must do to establish themselves as part of that group.

Fossil fuel worker identities are situated in a range of recognizable cultural narratives that help flesh out the profiles of bot accounts. The connection between workers and petro-masculinity or frontier masculinities provides ample cultural material that human users will draw on when engaging with bots. Of course, the framing of these cultural materials will differ based on the identity of the human user

interacting with the bot account. I will elaborate on these framings in further detail in the next section, but what is important to establish here is that there is a shared understanding of characteristics about fossil fuel workers that are familiar across the wider public discourse. The meanings of these characteristics and how they are framed is dependent on the identity of the human observer and the relationship of that identity to human fossil fuel workers.

Anonymity

The final characteristic of an instrumental bot identity is anonymity. Unmarked identities— those identities that are taken for granted as socially generic and universalized (Brekhus, 2015)—are less likely to be scrutinized by human users. Though fossil fuel workers are highly specialized workers and only make up a small proportion of the population, the expectations of the identity group are such that there are few expectations for traceability of any given fossil fuel worker in the real world. This primes fossil fuel workers to be mimicked by bot accounts without suspicion.

It would be much more difficult for a bot to perform the identity of a skilled professional, such as a lawyer, because this is a vocation that would be expected to have a verifiable digital fingerprint elsewhere online. For working-class identities like fossil fuel workers, social expectations are such that no one would necessarily be surprised if, for example, Bill, a fossil fuel worker from rural West Virginia, does not appear to have a digital presence other than his Facebook page. Identities that have these reduced expectations for traceability are less likely to be subjected to scrutiny, and are therefore easier for bots to escape scrutiny within.

Bot interactions in identity processes

Programmers

The identities of those who program bots are implicated in the chain reaction of identity effects. Their perceptions of the politically salient identities they program the bots to mimic are the catalyst for the following identity processes. Despite how effective their bots can be, they themselves are not omnipotent; they are other flawed humans. Their programming is undoubtedly going to have flaws, reflecting the gaps in their knowledge. So while their bots may be programmed to mimic certain identity groups or interact with users in particular ways, the effectiveness of bots is limited by the skillset and knowledge of the programmer.

In-group identity processes

Our social identities generate in-group and out-group dynamics between ourselves and others (Carter and Marony, 2021). We seek to defend those groups we are a part of from outsiders while engaging in an ongoing negotiation with our fellow group members around the norms of the group (Bourdieu, 1986). These in-group identity processes help us navigate the salience of a given identity among our many group memberships.

By mimicking members of a target identity group, bots can influence group norms, changing how group members perceive themselves and other group members. The in-group identity processes that bots take part in apply to two main groups. The first is among human users from the mimicked identity group. In the context of this paper, it would be human fossil fuel workers. Mimicry is critical to how social bots perform their identity (Hegelich & Janetzko, 2016). Depending on how the bot is programmed, the identity that it is designed to perform and those characteristics that it mimics to be convincing in its performance, are likely to draw on stereotypes about workers. At a minimum, the identities presented are reductive, unlikely to capture the full spectrum of individuals who do work in the fossil fuel sectors,

and playing to those caricatures that are most likely to uphold pro-fossil fuel sentiments. These caricatures signal to human workers a particular in-group identity.

By posing as workers and engaging with real human workers, bots can manufacture a collective sense of imagined outside threat from decarbonization policies. In this instance, this can take the form of emotionally affective content that is aimed at mobilizing human workers to unite together to combat initiatives that threaten the industry. For example, bot accounts can sow mistrust among human workers about the policies being presented to reduce the impact on workers from transitions, such as the Sustainable Jobs Plan in Canada or the Inflation Reduction Act in the U.S. Employed in large numbers, bots can create the illusion that other fossil fuel workers overwhelmingly lean a certain way, pressuring real fossil fuel workers to acquiesce to the alignment of the perceived group.

The second form of ingroup identity processes that bots take part in is those with identity groups adjacent to fossil fuel workers. Adjacent identity groups are those which may be distinguishable from the target ingroup but who still share enough characteristics that the verification of one identity is necessary for the verification of the other. One such group is fossil fuel supporters, those identities which, to varying degrees, see fossil fuels or the lifestyles they support as intimately tied with their identities but are themselves not employed in the fossil fuel sector. This support for fossil fuels intersects with masculinity and authoritarianism, where the threat to the privilege afforded by fossil fuels to predominantly white men can motivate authoritarian practices to secure ongoing status (Daggett, 2018).

We see this formation of petro-masculinity most often embodied on the political right, where decarbonization movements such as the just energy transition may be positioned as an attack from the political left to undermine petro-masculine hegemony. This may activate identity defense among those who see their political orientation as more closely aligned to the political right and skeptical of climate science or the need for dramatic climate action (e.g. Daggett, 2018).

Bots programmed to mimic fossil fuel workers that spread messaging aimed at engaging workers will inevitably share messaging that resonates with others who are not themselves fossil fuel workers but who have formed deep investments in the industry's maintenance.

Out-group identity processes: Opponents

In the example outlined in this paper, bots are programmed to mimic fossil fuel workers to spread messaging that resonates with those who are part of the worker in-group, whether that is other fossil fuel workers, or whether that is adjacent identity groups that share a broader collective identity. So in this case, the messaging shared by bots is meant to directly speak to these in-group identity processes. However, despite what the intention of the programmer was, there will be an identity effect felt from those who are not part of the fossil fuel in-group.

The commitment we have to our in-groups is matched with a distancing or "Othering" of members of out-groups (Islam, 2014; Tajfel and Turner, 1986). We tend to have a positivity bias for our in-groups and an exaggerated understanding of differences between our in-groups and out-groups. Out-group identity processes between bots posing as fossil fuel workers and decarbonization advocates could contribute to social media poetics, where, through essentializing and emotive discourses, both the fossil fuel worker bots (posing as real fossil fuel workers) and energy transition advocates mutually define themselves and one another (Shenton, 2020).

The same characteristics that make the bot successful at performing its fossil fuel worker identity, such as sharing content skeptical of the energy transition, may be those that validate the preexisting ideas that outsiders have of fossil fuel workers, entrenching the belief that they are all "like that." The success of energy transition movements like the just transition are centered around workers embracing the transition. If bots are promoting anti-transition content in an effort to influence in-group identity processes of human workers, they could also trigger out-group identity processes from energy

transition advocates who may become frustrated by the framing. This frustration could increase feelings of antagonism toward fossil fuel workers more generally, and result in more human-to-human conflict as a result of bots' performances.

Out-group identity processes: Public

By performing as a community of fossil fuel workers, coordinated botnets can influence how fossil fuel workers are viewed by the general public, resulting in significant political implications. While any group that it not part of the specified in-group tends to be lumped together under out-group identity processes, I argue it is important to distinguish opponents from the wider public when discussing the political impact of bot accounts because it considers those in the general public who have yet to form a strong identity connection to the key issue at hand. As a result, these identities have a limited investment in identity processes around the politically salient identity. Unlike out-group opponents like energy transition advocates, for example, the average citizen approaches the issue with greater neutrality and less personal investment in the identity processes of workers.

The general public's assessment of a politically salient identity group like fossil fuel workers has political consequences, but those in the public do not engage in the same degree of identity defense mechanisms in response to assertions made by bots posing as fossil fuel workers. Their investment in the issue is simply not as high as those who would fall within the opponent category. The identities of individual workers only matter to the public to the extent that these identities are part of society's broader understanding of fossil fuel workers as a group, as it is from these perceptions and stereotypes that the public more broadly draw their conclusions about the energy transition and the actors central to that process. By drawing on stereotypes that are readily available in cultural narratives to construct bot programs in the first place, bots can exacerbate political polarization (Bail et al., 2018) and further entrench cultural stereotypes about target groups (Van der Walt & Eloff, 2018) like fossil fuel workers.

Discussion

Climate change denial has been attributed to identity. More or better information is unlikely to change people's beliefs about climate change. However, people are more likely to consider information that verifies their identities. In the case of new or uncomfortable information that challenges one's identity, the greatest chance that one will consider the new information without outright rejecting it is if it comes from someone within their in-group. The more frequently members of an in-group share this new information, the more likely it is to shift group norms and boundaries. Because bots mimic real people, posing as members of instrumental identity groups, they are extremely effective at spreading targeted messaging.

Not everyone will universally accept the misinformation bots share; it has to resonate with certain identity groups. Therefore, which identity bot programmers choose for bots to mimic is a strategic decision governed by the desired outcomes of the bot campaign. The in-group dynamics are possibly the most obvious. In-group relationships, even on social media, are defined by greater trust in the source. Bots will inevitably participate in the identity negotiation of the group they are mimicking. The decisions programmers make around which identity to mimic have ripple effects with debatably unintended interactions with other identity groups. This creates out-group interactions. Some identity groups may be triggered into a form of identity defense based on their interactions with bot accounts. This identity defense impacts the identity negotiation of those opponent identities, but it also has a chain reaction effect on interactions between this opponent identity group and human members of the mimicked in-group identity. A ripple effect started by non-human actors then contributes to the social media poetics that define real humans in both the opponent identity groups and real people of the mimicked group. Finally, the characteristics of instrumental bot identities that make them so useful to mimic is their political salience within wider cultural discourses and narratives.

One of the most important takeaways from this framework is that the effectiveness of bots in influencing the real world does not exclusively come from their sophistication and ability to act like a real person. While this certainly helps them build trust with users and avoid detection from platform administrators, the reality is that users are motivated to engage with bots as real people, even when we know they are not a real person (Bail et al., 2018) because they activate our identities. By approaching the issue of bots on social media from an identity lens, we escape the fallacious assumption that more or better information will change how people engage with non-human actors on social media.

In the age of misinformation, the issue is not that people will wrongly believe anything they are told; it is that they will be unlikely to believe the truth if it undermines their identities. With access to a wealth of information, why would you engage with any information that challenges your identity and perspective of the world when you can find a host of actors (real or not) to support the illusion that the world is indeed, exactly as you see it? Even in the case of out-group interactions with opponents, your identity is validated by a confirmation of who the "other" is. The poetics in which you engage verify your identity and that of your opponents (Shenton et al., 2019)

This does not mean we are stuck in a hopeless loop, entrenched in static definitions of ourselves. Identities can and do change. However, they resist change because identities are in relatively static salience hierarchies (Stryker and Serpe, 1982: Carter and Marony, 2021). Those identities in positions of privilege are therefore more motivated to resist change than other identities because not only does it involve the negative emotions of any identity change, it also threatens their status. It is these identities that are threatened most by paradigmatic shifts like the energy transition that provide the most firm foothold for motivated actors to resist change, and bots are merely the latest in a host of misinformation tools that allow them to do so.

Fossil fuel workers are one such group of instrumental, politically salient identities, part of a collection of frontier masculinities that have benefited in various ways from fossil fuel hegemony. While politically salient identities hold such status due to their central role in wider cultural narratives, groups that seek to challenge dominant framings must be cautious in how they respond to these identities. Addressing politically salient identities risks reifying existing framings by qualifying the salience of groups who matter and reducing the possibilities for change. It can risk upholding existing social hierarchies instead of renegotiating the problem from another angle. For example, in the context of the energy transition, if decarbonization advocates focus efforts on the issue of unemployed fossil fuel workers first and foremost, they limit the possibilities to advance a new system where worker well-being does not require physical self-sacrifice and is not limited to able-bodied individuals who, historically, have been mostly white and male (Bell et al., 2020). For movements like the just transition to center justice, they will likely need to resist rewriting past narratives about familiar actors and forge ahead with writing new ones.

Conclusion

The emergence of social media as a primary medium for social interactions has created an emotionally affective ecosystem through which traditional identity processes are disrupted. Social bots can intervene in our digitally mediated interactions via platform environments, posing as real people and influencing identity processes. The relative accessibility of bot programming tools allows actors with vested interests in key issues to influence the narrative to their own advantage. Quantitative approaches for detecting bots and measuring their political effects are restricted by the closed platform interfaces of most social networking sites and the limitations in human researchers' abilities to identify bots. A growing body of work has attempted to reconcile the increasing involvement of non-human actors within identity processes. This paper has sought to provide a launch point from which such endeavors

may be undertaken, by outlining the centrality of politically salient identities within cultural narratives, and how these are susceptible to co-option by non-human users on social media accounts. I have provided a theoretical framework for how this is accomplished, first through the selection of relevant, familiar, and anonymous identity groups. I then outlined how botnets participate in identity processes, engaging with in-groups, out-groups, and the broader public in ways that are consequential to shaping the overall narrative around major issues.

Chapter 3- ‘It provides the lifestyle that we have’: masculinity, class, and fossil fuel worker support for a just transition

Introduction

The climate crisis is causing increasing pressure for action, following yet another record-breaking year for high temperatures in 2023. This has substantiated calls for a just transition in Canada and beyond. At its most basic level, a just transition aims to ensure that no group is disproportionately impacted by decarbonization, focusing particularly on fossil fuel workers and their communities. The level of appreciation for these efforts varies significantly across affected communities.

A growing body of research has sought to explore the extent to which fossil fuel workers and their communities support these efforts. Despite the increased and urgent call for the implementation of just transition policies, the measures proposed to mitigate adverse impacts on fossil fuel workers from the transition away from extractive practices does not necessarily sway labourers toward support for the transition. This suggests that there is more at stake than workers’ material wellbeing. One common explanation for resistance is that workers’ identities often become linked with carbon-intensive development, creating connections between role and social identities that are difficult to overcome. Because extractive industries are still male-dominated, exploring the links between gender identities and resistance to transitioning could help gain community support for transitions.

The entanglement of masculinities with activities that are by their very nature ecologically destructive has been a topic of scholarly interest for since the 1970’s. Empirical work has noted that white men are the least likely group to express concern about climate change or the environment (McCright and Dunlap, 2011; Davidson and Freudenberg, 1996; Krange et al., 2019). Men resist climate action to defend their identities and lifestyles that emerge in extractive contexts (Daggett, 2019; Pule &

Hultman, 2019; Krange et al., 2021). If this assumption is true, it poses significant if not irreconcilable challenges to achieving a just transition because identities are not easily changed.

This paper examines the role of masculinity in shaping resistance or support for a just transition through semi-structured interviews with Albertan oil and gas workers. I argue the hyper-masculine culture across the fossil fuel industry does not impact worker support for a transition. Instead, class-based gender stereotypes undermine the trust of field-level workers that they will benefit from transition. This research advances efforts to mobilize worker values to support the energy transition. By problematizing assumptions about identity defense and support for the transition, it moves beyond simply acknowledging the connections between certain masculine identities and natural resource extraction to outline pathways of action.

In what follows, I provide a brief overview of what a just transition is and the importance of identities in shaping transitions. I then review existing scholarship on masculinities and resource extraction, before explaining the context of this study in Alberta's oil and gas industry. I follow this by outlining the methods of the study, before highlighting the key findings and discussion.

Literature review

Just Transition

The term 'just transition' emerged among worker activist groups in the 1960s-70s as a response to new environmental regulations (Cigna et al., 2023). The Oil, Chemical, and Atomic Workers Union (OCAW) sought to disrupt the jobs vs. environment discourse that had become popular among high-polluting industries (Stevis and Felli, 2015). The union was the first to propose funding for worker retraining and reallocation after toxic facilities closed (Wang and Lo, 2021).

The idea of a just transition was created by labour groups to help workers adapt to new industries; however, its contemporary situatedness in professional class climate politics may alienate many working class individuals. The professional class has emerged in the postwar era in pace with deindustrialization and the expansion of higher education across Western nations (Huber, 2022: 5). Unlike the working class, the professionals perform “knowledge work” and tend to be further separated from production. While the just transition emerged in part to reduce labor groups’ resistance to transitioning, its contemporary connection to the professional class shapes its execution in ways that may feel alienating to working-class individuals.

The professional class has been predominantly responsible for shaping the climate movement. This has resulted in two major consequences for climate politics (Huber, 2022). First, professionals tend to focus on their own consumption habits as the main cause of climate change, while overlooking the role of industrial production. Second, because they’re highly educated, they often focus on the science of climate change. This focuses professional-class climate politics on "knowledge" or denial of climate change over a material struggle for resources and power. The technocratic focus of professional class climate politics fails to marshal the kind of mass movement necessary to defeat fossil fuel hegemony.

Substantial qualitative research has provided insights into how workers are managing the contemporary transition (Carley et al., 2018; Haggerty et al., 2018; Cha, 2020). Survey-based studies have also concentrated on specific aspects of just transition policies, including support for workers (Mayer, 2018), financial aid (Gaikwad et al., 2022), and attitudes towards sustainable industries (Crowe and Li, 2020). There appears to be more support for policies that are designed to ease the transition for fossil fuel workers, including provisions such as pensions, healthcare, and income support during retraining (Gazmarian, 2023). Additionally, access to accurate information about transitions can help dispel lingering resistance to transitions.

Just transition policies do not always translate into support from affected communities. Within just transition scholarship, there is a growing interest in the role of social identities in shaping community support or resistance to a transition (Cha, 2020; Mayer, 2018). Identities are central to how individuals and social groups respond to changes in social circumstances. Therefore, the identities of affected labour groups may provide insights into the mechanisms behind resistance or support for transitions among affected labour groups.

Identities

Identity shapes the structures of social organization. Generally, identity may be categorized into three types of identity: “personal,” “role,” and “social” identities (Burke and Stets, 2009). Personal identities consist of the unique collection of characteristics and values that define an individual. Social identities derive from membership within specific groups, informed by the knowledge one is part of that group and the emotional significance placed on that membership (Islam, 2014; Tajfel and Turner, 1986). Role identities represent performance expectations, such as parent, spouse, or worker and are more likely to change that social or personal identities (Carter and Marony, 2021; Stryker and Serpe, 1982).

Individuals manage multiple competing identities with varying degrees of social value and relevance that change over time and across contexts (Stryker, 2008). When multiple roles and identity groups come into conflict, individuals rely on relatively static salience hierarchies, where different identities are more or less likely to be invoked in differing contexts. Commitment determines the salience of individual identities. Identities that are more or less important to the individual are ordered to reflect this commitment. A wide variety of factors can influence commitment, but having one’s identity challenged can typically have one of two ranging impacts: individuals may choose to distance themselves from an identity group, or they may choose to embrace it more closely and defend it (Tajfel & Turner, 1986).

As political circumstances change, what is advantageous also changes, and the social value of different identities changes. As a result, identity salience is instrumental and informed by our desire to maximize rewards and avoid losing social status (Posner, 2017). An identity may become activated when there is the threat of a loss in status (Carter, 2013). Higher-status actors are better able to maintain stable identity meanings than lower-status actors or groups (Davis and Love, 2017), which leads to self-verification and positive emotions (Stets and Burke, 2014). These motivations to secure meanings in the world that uphold one's own status thus highlight the very political nature of identities.

Masculinities, energy, and the environment

Masculinities, like other identities, are defined in the everyday and routine through perceptual and interactional activities (Connell, 1995; Holter, 1997). There is no singular expression of what masculinity is. Each person's display of masculinity contributes to shared understandings and identities that vary across different social situations. (Connell and Messerschmidt, 2005). In the Western context, masculinities are negotiated within a gender order that situates it in opposition to femininity, creating a power dynamic between men and women as groups (Connell, 1995).

Hegemonic masculinities hold the highest status in contextual gender relations (Messerschmidt, 2018). Hegemonic masculinities operate to preserve the gender hierarchy from which they benefit (Filteau, 2014). They maintain their hegemony by influencing social organization in ways that appear natural (Donaldson, 1993).

The extractive industry is a quintessentially hyper-masculine field (Lahiri-Dutt 2015), shaped by masculine norms governing appropriate actions, emotions, and identities (Bryant and Jaworski 2011; Ey et al., 2017). Men dominate this sector, characterized by attributes like strength, resilience, endurance, independence, 'toughness,' and an aversion to perceived weaknesses and vulnerability (Di Chiro, 2017).

Numerous definitions have emerged to refer to those frontline extraction workers whose identities become the most directly implicated by efforts to transition away from fossil fuel energies, including petro-masculinity (Daggett, 2018; Allen, 2022); frontier masculinity (Prasad, 1997; Miller, 2004; Richards 2019; Williams, 2021); industrial masculinity (Hultman and Anshelm, 2017); breadwinner masculinity (Pule and Hultman, 2019; Vowles and Hultman, 2021); and working-class masculinity (Bell and York, 2010). While there is a nuance between each term, they share a similar focus on the relationship between workers' role identity as fossil fuel (or other extractive industry) workers, and their gendered identities or masculinities.

Essentialist gender stereotypes about men are often so normalized they go unchallenged (Hatton, 2022), and this has proven to be true within the fossil fuel sector. The generated gendered scripts that emerge for many who work in fossil fuel and resource extraction have produced synergies between role and gendered identities, connections that make securing support for climate action among these groups appear unlikely as energy transition threatens these identities (Allen, 2022). Worker resentment towards decarbonization policies become heightened by the frustration or shame of not being able to 'live up to' (Hanlon, 2012) these generated gender scripts, while being expected to by their families and society more broadly. In the face of growing economic uncertainty and the rise of post-traditional and ecological values, there is a heightened defensive reaction among those holding onto industrial and petro-masculine identities (Allen, 2022). This adherence reinforces the hegemony of these identities, creating barriers to ecologically equitable futures.

Context

The Canadian oil and gas industry contributed 7.5% to Canada's GDP in 2019 (Alahdad et al., 2020). It is the world's fifth-largest producer of crude oil and fourth-largest natural gas exporter. Alberta is the heartland of the industry, accounting for 74% of the country's oil and gas extraction. The industry

encompasses various operations, including heavy oil sands mining in northern Alberta, Steam Assisted Gravity Drainage (SAG-D), and natural gas extraction. Overall, oil and gas plays a large role in Alberta's economy, accounting for 21.83% of the provincial GDP in 2021 (Statistics Canada, Table 36-10-0400-01). The sector is known for its high mobility, especially in boom towns like Fort McMurray, attracting labour from across Canada. Many field workers travel extensively, though some positions, like natural gas operators, are site-specific. The work is often hazardous, with safety being a significant concern compared to adjacent industries (Dang et al., 2019).

Men make up 79.1% of the workforce (Statistics Canada, Table 14-10-0023-01). The distribution of labor is also highly gendered and racialized, with white men the most likely to earn higher incomes across all occupational fields (Alook et al., 2021). Women and minorities are much more likely to be employed in related service industries that support extraction but do not benefit from the same high wages (Dorow, 2015; Dorow and Mandizadza, 2018).

The impact of resource extraction has included increased rates of gendered violence where energy development occurs. The development of industrial work camps to house energy workers has been correlated with social impacts on communities, including a rise in sexual assaults and MMIW (Missing and Murdered Indigenous Women) (Amnesty International, 2016).

Tensions about the social impacts of oil and gas workers have warranted significant push back from industry defenders. For example, in response to Prime Minister Justin Trudeau highlighting the need for gender-based analysis around resource extraction projects, Jason Kenney, the Premier of Alberta at the time, tweeted the following reply:

Justin Trudeau says pipelines must go through a 'gender-based analysis'

because male construction workers have 'impacts.' Darned right they do.

They build things, create wealth, pay taxes, take care of their families. But

this trust fund millionaire thinks they can't be trusted. (Kenney, 2018)

Other Canadian conservative politicians, like Pierre Poilievre have expressed similar sentiments to defend fossil fuel workers.

The first federal just transition initiative was targeted at thermal coal mining communities. In 2018, the federal government launched the *Task Force on Just Transition for Canadian Coal Power Workers and Communities*. The purpose was to "provide the government with recommendations for how to support a just and fair transition for Canadian coal communities and workers" (Task Force, 2018: 2). Though communities from across the country were part of this initiative, two-thirds of communities part of the pilot were based in Alberta. The initiative was largely a failure. A 2022 report from the Office of the Auditor General of Canada found that the two federal government departments that were responsible for overseeing the transition- Natural Resources Canada and Employment and Social Development Canada- were not prepared to support a just transition to a low-carbon economy for workers and communities.

Methods

Through qualitative, semi-structured interviews, this study examines the identity work among Albertan oil and gas workers and the reflexive processing that shapes their positions regarding extraction, a just transition, and their identities (Cresswell, 2013). Emphasis was placed on going beyond the question of what identity is to explore the ethical and pragmatic questions of what identities can do (Bhabha, 1997), particularly as it relates to the maintenance of fossil fuel hegemony and perceptions of a just energy transition.

In total, I conducted 29 semi-structured interviews with Albertan fossil fuel workers between November 2022 and May 2023. Participants were recruited through advertisements on Facebook, snowball sampling, and the author's professional networks from their own time working in the Albertan oil and gas sector. The criteria for participation was that participants identified as an "Albertan oil and gas worker." This broad criteria for inclusion was used to ensure a wide representation of individuals who worked in the industry and who would, in various ways, be impacted by the proposed just transition policies. Respondents included fieldworkers, who spend most of their working hours outdoors or in industrial shops constructing and operating equipment and infrastructure like pipelines, to engineers and office workers who are more involved with the institutional management and design of oil and gas companies.

Sixteen of the participants were employed as fieldworkers, with the majority either employed or trained in a skilled trade like electrician or pipefitter, and four who were in field-level management (e.g. gas plant operators). Of these sixteen fieldworkers, three had university degrees in addition to their trade certifications. The remaining thirteen participants were office workers, eleven of whom had university degrees. Seven participants identified as women. Only two participants identified as visible minorities in the industry, both of which were office workers. Two fieldworkers self-identified as Métis.

Identities are constructed by the social meanings ascribed to them by both those that are a part of that identity, the in-group, and those that are not, the out-group (Tajfel and Turner, 1986). Regardless of whether someone identifies as a part of a particular identity group or, in the case of ascribed identities, whether they express a strong commitment to a particular identity, the meanings that any one individual imposes on an identity contribute to the complex mosaic that creates identities in the social world.

Participants were asked a series of questions designed to understand the multiplicity of workers' identities, and the relationship of the industry, climate change, and provincial and federal politics to these identities. Workers were asked about their employment in the industry, including what they liked or didn't like about their jobs, how they came to work in the oil and gas sector, their perceptions on industry safety, whether they would be willing to work in a different sector, whether they identified closely with this culture, and if they felt that representations of the industry in the media and by Canadian political leaders accurately captured how they saw the industry. I also asked participants about masculinity and the industry, asking them to share how they would define masculinity, and whether they saw the overrepresentation of men in the industry as a problem or not. Participants were engaged about their identification with the environment and climate change, and were asked whether they felt like the industry did a sufficient job of addressing these issues (or whether these were issues worthy of addressing in the first place).

Workers were asked about their familiarity with the concept of the just transition. They were then provided with a brief overview of where the concept originated, how the Canadian federal government was interpreting the concept, and then asked what they agreed or disagreed with. During the course of the interviews, the federal government released the guiding document for the Sustainable Jobs Plan, resulting in widespread outrage from oil and gas regions and the premier of the province. I then had to revise the overview I was providing to participants after the first seven interviews. Finally, workers were asked about their future outlook both for the industry and Alberta as a province more generally.

Interviews are a collaborative process in which both the interviewer and interviewee co-construct meaning (Cassell, 2005). The identities of those involved shape the relationships formed during research, which in turn affects the data gathered (Fina, 2009; Razon and Ross, 2012). Identity is a

product of competing discourses that reflect power relations in a particular social context (Foucault, 1977). During an interview, participants, including the interviewer, engage in "identity work" by utilizing these discourses to present themselves (Goffman, 1971). Individuals are motivated to have their identity meanings verified (Stets and Burke, 2014). In anticipation that many of my possible participants would identify with a conservative political ideology that tends to view academic researchers with suspicion, I shared my past experience working in Alberta's oil and gas industry with participants to build a sense of trust.

Most interviews occurred on the phone (13) or on Zoom (11). Five interviews took place in person. All interviews were audio-recorded, transcribed, and entered in NVivo. Interviews were open coded, then analyzed into broader themes. The study was reviewed and approved by the University of Alberta Human Research Ethics Board (approval number Pro00121714).

Findings

Expressed understanding of masculinity

When asked how they would define masculinity, most participants struggled to do so. As one office worker put it:

"I've never thought of the word." (Interview 24)

Some of the office workers were more comfortable producing a definition on the spot, citing their familiarity with thinking about gender and inequality from their university education. For most, especially field workers, this was not something that participants had attempted to articulate before. Characteristics such as bravado, being controlling, or the need to be performative were cited by the female participants. Other characteristics, such as being rational and respectful, were prevalent across

most male participants. Among fieldworkers in particular, characteristics such as tough and strong also emerged.

Many field workers became suspicious when the question about masculinity was initially asked. Several pushed back to ask what was intended by asking that question:

> *What do you mean by that question? Men are stronger than women? Is that what you want to hear? (Interview 28)*

Others did not ask to clarify but assumed that the question was specifically in reference to toxic forms of masculinity or assumed that I believed masculinity was toxic. Fieldworkers were more likely to defend masculinity from this perceived attack. This was particularly prevalent among fieldworkers:

> *"Toxicity and masculinity are almost always in the same sentence. I find that really damaging to men. Masculinity, to me, is protectiveness and setting a great example for people around you. It's sacrificing yourself for things around you, like family, friends, etc. It's being strong for other people when they can't be strong. That's what masculinity is for me. You ask other people, and people will say, "Oh, masculinity is about getting drunk with your friends and hitting on girls and, like, these kinds of things, right?" It's like, that's not really masculinity. That's this weird societal thing that we're told is masculine. It doesn't make sense." (Interview 15)*

When prompted to provide an alternative, male fieldworkers and office workers referred to their role identities as fathers and providers within their family as representative of what it meant to be a man, including a requirement to be a protector and sacrifice their time for their families.

Several office workers maintained a definition of masculinity that was in line with more negative characteristics, though a few noted that the meaning of masculinity was changing:

Four or five years ago, I would have given them an answer that will probably lead towards toxic masculinity. Since then I've done some work with some supportive individuals in my life. I think that there is a slowly dying concept of masculinity being like a strong individual who doesn't show emotion, who has a traditional I-take-care-of-the-family-by-working-my-ass-off mentality. I don't cry, I don't do things like that.. I think that was the definition of masculinity up until a few years ago, but now I think that is dying. (Interview 19)

Industry Culture

Office workers and fieldworkers spoke to a fast-paced and intense work environment. Descriptions of this workplace culture ranged from pressure to work hard, to bullying for anyone who was unable to sustain the required output. Participants across vocations spoke to a work-hard-play-hard industry culture:

When I was 19, during my first year, I had my first "oil and gas" Stampede.[3] The Stampede is obviously a big cultural thing. We went drinking with the whole office until God knows when, but we always had an expectation of being at a 7:30 meeting every morning. Everyone was there, hungover, in horrible shape. Tthe whole thing, it wasn't productive, but everyone was there, you know, and that's kind of the spirit I think. There's no taking sick days or making excuses. People showed up (Interview 8)

Substance use was a strong theme in most participants' descriptions of the industry, ranging from drinks after work, to co-workers using substances while on the job. Substance abuse was more

[3] The Calgary Stampeded is a rodeo and exhibition that takes place in the City of Calgary every summer. As Calgary is home to the head offices of many of Canada's oil and gas companies, many of the corporate sponsors of the Stampede are energy companies (Williams, 2021). Stampede also involves 10 days of festivities which are heavily attended by many who live in Calgary.

commonly noted among field workers. Four fieldworkers shared they were sober and discussed the pressure they have experienced to participate in substance use.

Most participants acknowledged the overrepresentation of men in the industry. While the majority of women and a number of male participants touched on the sexist and occasionally hostile work culture they experienced in the industry, some men argued that the industry was a meritocracy that rewarded only those willing to do hard work. Some expressed that the dirty nature of fieldwork, the extreme, outdoor working conditions, and the need to take care of families at home were the main reasons there weren't many women represented in the industry.

Women don't really go into the industry. I don't think it's really changed in the 20 years I've done the oil patch. There's always the odd woman here and there but it's not…it's hard work. We work outside all year round. All the women maybe don't have that kind of ambition to do that or maybe only do it for a few years. And then they get married and raise kids (Interview 12)

A perceived generational gap between the "old guard" of male workers, who were described as sexist, from the younger generations who were considered significantly more inclusive, was noted by many participants. However, even those defending the industry in this case tended to acknowledge a distinct decorum:

"We're not like catcalling every girl that passes but it's still kind of crass. And I guess that comes with the territory" (Interview 14)

Only two participants identified as visible minorities in the industry, both of whom were office workers. Two fieldworkers identified as Métis. None of these participants mentioned direct experiences

of racism, but a number of participants noted their personal observations of racism towards other employees on site.

> *"Oil and gas will be the last to change. I think we can say that when oil and gas is accepting of everyone that we've actually made a difference in this world. And it's starting to happen." (Interview 19)*

Identification with the industry

About half of the participants stated that the industry was important to their identity. The importance of the industry to participants' identities was most frequently attributed to the economic opportunities they had because of the industry: it helped them to provide for their families. This sentiment was unanimous across field workers, while the majority of the office workers indicated that the industry was not important to their identity.

Both office and field workers felt the industry demanded a great deal from them, with long hours, a fast pace, little patience for learning from supervisors, and little room for mistakes due to the dangerous nature of work. Despite these hardships, workers expressed pride in their jobs. They enjoyed being part of developing a key resource and they were proud of steps the industry was taking to reduce its impact, both socially and environmentally.

Workers expressed frustration that these strides that had been made in the industry were never recognized. They felt that the industry and by extension themselves were vilified by the rest of Canada, particularly by the political left. Many felt that the way they were represented by the media was inaccurate and perpetuated harmful stereotypes:

"I've heard it all. You know, diesel truck driving and uneducated rednecks. I've heard, "You should have saved your money while you could instead of pissing it all away." It just never ends. It just never ends (Interview 22)

The stereotypes that participants perceived being circulated about fossil fuel workers did not align with the way most of them saw themselves: as hardworking family men:

"That's an outsider's point of view. That's what people think it is. People think it's all a bunch of 18-year-olds in jacked-up pickup trucks that snort coke and screw hookers and yell at people. It's actually nothing like that at all. Every person I work with is married. They have a family. We have nice trucks because we work in shitty areas and you need a reliable vehicle. I drive on roads every day that 90% of the population will never see. You know what I mean? So you need the right tool for the right job. It's like taking a sledgehammer to do finish nailing on a cabin. It just doesn't work. You need the right tool for the right job. That's all there is to it." (Interview 20)

Many felt that as a result of these stereotypes it was difficult to feel proud about how they were caring for their families anymore.

"I used to be really proud to be in the industry. I still am. I think it's vitally important. I just don't like being vilified in the press and you know, being held accountable for climate change and everything else that's going on. I've had friends and relatives call me names because I'm in the oil and gas business and I'm just doing the job… So that's the part that really bothers me, being called an eco-terrorist because they don't understand how the business works. They don't understand… so that's the part that's become very disappointing" (Interview 13)

"Yeah, I remember during 2004, I was so proud to be from Alberta. So proud. And every other province now I've talked to has made me feel like I was a piece of shit because I am from Alberta." (Interview 23)

Participants were frustrated that, while they were being vilified for their employer, the rest of Canada was still consuming the fossil fuel products they were producing.

"I think it's actually really cool that we're taking raw product that's sitting there and you know, we're an energy producer. We're creating energy from this where it's a big industrial process, whereas, like, a lot of outsiders, they don't see the technology, the science the process behind it, what it takes to get something from point A to point B to now, you have natural gas that powers your home or your car, whatever you want it to. You know what I mean? There's a lot of stigma behind that. People don't see the effort and the work that goes behind it" (Interview 20)

"It's very hard for an oil patch worker especially when they see in your resume that you do have oil and gas experience. They want nothing to do with you. You're pretty discriminated against even though I think they make a big mistake in that role just because of the type of workers we are and what we can do and how well we are trained." (Interview 22)

Many resented that outsiders didn't realize how much they actually did care about the environment.

"I've taken my company's money that I'm in charge of spending, and I hire people to come pick up all the garbage and clean it up. I don't have to do that. I don't have to have them come clean up leases or public land but I do because I think we should

leave this place nicer than when we got here. People just think of oil as this dirty, toxic thing that pollutes the environment. That's not actually true. Unless you see it firsthand, you don't know what's going on. I have a lot of respect for what I do." (Interview 20)

A Just Transition

Participants who were interviewed prior to February 2023, when the Federal Government released the first document of the Sustainable Jobs Plan, had not heard of a just transition before. Interviews after that point would often indicate that they had heard of it before, but expressed limited knowledge of the breadth of the movement more generally. No participants realized the history of just transition movements were rooted in labour movements and many were surprised that worker wellbeing was central to the concept. There was general support for just transition policies, even among those who did not believe in anthropogenic climate change. For example, programs that would retrain workers.

"We're not going to get better and alternative energies if we don't help to train people to design, build, and maintain it. So yeah, I support [retraining]" (Interview 7)

Notably, those who had a university degree were the least concerned about transitioning. They expressed confidence that there would be jobs for them in a transitioned economy that continued to pay well. Fieldworkers were more apprehensive about their futures. Those in transferable trades, like electricians, were more optimistic about transitioning, but most were skeptical about their prospects in a transitioning economy. Few believed that they would be retrained for jobs with equivalent pay that would allow them to maintain their current quality of life.

"Yeah, they're obviously out of touch with the salary expectation. Like I said, it's not that I'm totally against wind or wind turbines. That's what it is. But then to ask somebody to quit their job and take a job for half the pay is like, that's asking a lot. I think that the federal government is thinking, "Oh, a job's a job." No, you have to keep their same standard of living, right?" (Interview 18)

"Isn't that the problem though? There's no other industry I could make this kind of money" (Interview 27)

Participants universally expressed skepticism that the current federal government was capable of passing policies that would secure a just transition for them.

"The government's trying to upskill oil and gas workers. So that's a good thing. But that's not how oil and gas see it, because, of course, the Liberal government has not demonstrated knowledge about how our sector works or its importance to the Canadian economy in the past. Therefore, there's no trust there. So that's why the just transition has been vilified" (Interview 9)

Others also spoke to this mistrust of the federal government:

"I've heard a lot of promises from them. But what are they retraining us for? What's our guarantee? There's nothing, it's just hearsay to us. Actions speak louder than words." (Interview 22)

Another element of skepticism emerges from broader mistrust in any government intervention, especially ones that are perceived as impacting individual autonomy. As one worker observed about their peers:

"I think my perspective is very 'oil and gassy' as far as the people I've talked to about it. They hear "just transition," and they're thinking communism, they're thinking the end of the Alberta way of life… The province has been a supporter of the whole Federation financially over the years, and now that's gone, and [workers] are afraid. And I think that's what it comes down to: they're afraid for their livelihoods. Nothing's gonna replace it and then they're going to be expected to live off the handouts."

(Interview 19)

Skepticism from others stemmed from the lack of a comprehensive roadmap or plan for a just transition from the federal government. Participants felt that the federal government did not have a plan in place for actually achieving an energy transition. As a result, they were concerned that the industry would continue to be the target of emissions reduction legislation without alternative industries being supported to replace these jobs.

"What's the alternative? What are we transitioning into? Great, how does it benefit me and my children and my belongings? How will that increase my net worth? And how will it not decrease it? Because oil and gas is so important to a lot of Albertans, specifically Albertans. How is it attractive? There needs to be some sort of stage where they look up on that stage and, like, that's our goal, and it's good for me and my children. And it's not a clean Earth. Let's be honest with you. A lot of people don't give a shit about a clean Earth, right? Many… an uncomfortable amount of people don't give a crap. And so there needs to be, at the end of the day, a financial incentive. Basically, people are very money motivated" (Interview 15)

The financial motivator provided by work in fossil fuels was the primary motivator most participants stated for working in the industry. Field workers expressed considerable concern that the class mobility they had secured by working in the industry was under threat in a transitioning economy:

"It's the most amount of money I can make with the education that I have. Grade 10 education. There's not a lot of opportunity other than trades. And I chose this one so… we'll defend it tooth and nail because it provides the lifestyle that we have," (Interview 21)

"Yeah, there's other industries that pique my interest, obviously not all of them, but yes, I would have. I guess the challenge there is you can get into the Alberta energy industry, with very little education, just a high school diploma. And 10 years later, you can be making an awful lot of money, right? I worked with someone one time, he was just a plant operator who had a degree in psychiatry. He was actually a doctor. I asked, "What are you doing operating?" And he said it was for the money. He said, basically, he could set up his own practice and it would cost him so much and then insurance will be those much and for him, it was a simple economics and he said that nobody expects anything of me out here, which was pushing it a bit but obviously very high expectations on people in psychiatry" (Interview 17)

"And I think people are up here and sacrificing for that ability to be middle class. That very narrowing gap of what middle class is. And I think people are only up there for the money. That's the only reason people are working in general, is for ability and income" (Interview 19)

Beyond pay, other components of a good job that workers wanted to see represented in a just transition included a good company culture that rewarded hard work, with reliable employment that allowed for work/life balance.

> *"Characteristics of a good job is that someone gives you the opportunity to make a fair amount of money, pay your bills, or be fairly compensated for your time and effort. Your time and effort are also appreciated, and where you are trained properly, where you're getting proper safety measures and stuff like that. And safey measures are actually enforced not just something for your company image so that you can make it home to your kids every day and your wife every day or whatever. And also a job that's positive for the world and for the environment in something that you feel good about at the end of the day. Not where you feel like a rig pig or have that kind of negative connotation towards it. Where you can feel respected by the community if that makes sense, you know what I mean? So I really hope that there's going to be a change. I really hope that there's gonna be job alternatives for people like myself, and I really hope that they find a more sustainable way of sustaining society" (Interview 21)*

Discussion

Masculinity, class, and defending status

Masculine identities are often linked to natural resource extraction. This connection can fuel resistance to climate action, as it threatens the extractive activities that reinforce these identities. However, interviews reveal a nuanced picture. While masculine identities are indeed tied to the oil and gas industry, this doesn't necessarily translate into blind loyalty to fossil fuels. Instead, the affirmation of

gendered identities seems to stem more from the financial stability these jobs provide for workers' families, rather than the nature of the work itself.

Despite the centrality of masculine norms in the industry, this did not translate into workers being comfortable discussing masculinity. Office workers were, however, more comfortable discussing masculinity than fieldworkers. Office workers' comfort in discussing masculinity may stem from their university education, where they likely engaged with gender concepts. Their daily exposure to a corporate environment, including EDI training initiatives, could also have prompted them to contemplate gender identities. On the other hand, fieldworkers' discomfort might be influenced by prevalent stereotypes about working-class men, particularly those in Canada's oil and gas industry.

Fieldworkers expressed concern that the rest of Canada had misguided understandings about who fossil fuel workers were, rooted in gendered and classist stereotypes. As a result, they felt they were unfairly judged for their employment in oil and gas. Office workers' concerns were less personal. While they noted that climate initiatives disproportionately sanctioned the industry, they did not feel like they were personally implicated in stereotypes about oil and gas workers. Instead, many office workers contributed to upholding the gendered stereotypes about fieldworkers, passing on the blame for the toxic, male-dominated industry culture to those who worked in the field. This is, of course, despite the fact that all of the female office employees described experiences of discrimination in the office environment, too.

Participants still feel the need to defend the industry from these unfair criticisms. As already noted, many expressed pride in what they did, with several participants lamenting the loss of respect they have undergone over the last decade. However, this desire to defend the industry from unfair criticism did not seem to equate to an unwavering loyalty to working in the fossil fuel sector. Participants

generally expressed willingness to trade in their roles as fossil fuel workers, so long as it did not compromise their gendered roles as economic providers for their families.

Class differences between office workers and fieldworkers influenced how defensive they were in the face of the transition. As part of the professional class, office workers were optimistic about their future in the energy transition. The professional class is primarily responsible for imagining, communicating, and enacting a just transition (Huber, 2021). The need for intellectuals remains unchallenged in most dominant conceptualizations of a just transition, as the professionals imagining those futures tend toward a dematerialized understanding of sustainability futures (Huber, 2021). The fate of fieldworkers, on the other hand, has received relatively little comprehensive consideration. Certainly, the problem of retraining fieldworkers for a transitioning economy is a growing area of both scholarly and policy interest, but the material questions surrounding what industries are to absorb the excess labor shed from fossil fuels remain unclear, and fieldworkers are skeptical of transitioning as a result. To clarify, their primary issue is not with leaving behind their fossil fuel worker identities, the problem for most fieldworkers was a very material one: where would you have me work instead?

The just transition started as a labor-led movement to minimize the impacts on workers from a transition, but this is not the message that field-level workers receive from the federal government's interpretation of the concept. The fossil fuel workers in this sample had all been a part of the downturn in the Alberta oil industry over the last ten years. Their material security had already been threatened before, and many believed that without a clear plan for transitioning, most of them would face similar economic insecurity in the near future. It is especially noteworthy that salaries in the fossil fuel industry have provided upward mobility for most field workers. They make much higher wages relative to their education than they would in a different sector. This is not true for the office workers. As part of the professional class, they can expect to make similar wages in a different sector. As far as most of the field

workers in this study were concerned, a just transition required them to take a wage cut that those who were calling for a transition did not need to consider.

Mobilizing the values of workers to support the transition

Maintaining their quality of life was the most important issue for workers to support a just transition. Most male participants expressed that it was their responsibility to financially provide for their families, regardless of the personal sacrifices that might entail. They were receptive to transitioning as long as they could continue to live up to this role responsibility. Belief in climate change was not a factor in support for a transition; instead, trust that policies would be in place to support workers through the transition was of far greater concern.

Participants in this study were skeptical of the federal government's intentions and capabilities of executing a just transition that would benefit oil and gas workers. The most recent efforts of the Canadian federal government to execute a just transition for coal communities was a failure (Office of the Auditor General of Canada, 2022). Workers do not trust the federal government to do better a second time around, certainly not without some serious planning ahead. These findings highlight the concerning reality that, despite a "just transition" being specifically focused on worker wellbeing in Canada's Sustainable Jobs Plan, that is not the message that workers are hearing. Fieldworkers, in particular, see themselves as being cast as the villains in Canada's energy transition story and, naturally, doubt that they will then be the recipients of any form of justice.

Dismantling gendered structures of power

The hyper-masculine culture of the oil and gas industry did not affect workers' support for a just transition; however, this culture must still be confronted for its role in upholding masculine hegemony if a transition is to be truly just. Workers were primarily concerned with maintaining their existing lifestyle, but why should the threat the wages of oil and gas workers be a concern? After all, by many metrics,

fossil fuel workers in Alberta are part of a privileged few. With relatively little education, fieldworkers in Alberta earn far higher wages than others in the working class (Statistics Canada, 2024). This sets them apart from many in the service sector with equivalent education who do not enjoy the same upward mobility, particularly women and racialized groups. Most participants acknowledged this monetary advantage; indeed, the grounds from which much of their frustration seemed to stem was from the reality that the transition threatened this material advantage available to so few. Furthermore, few participants seemed to believe this exclusivity was a major problem, positioning their own hard work as evidence that the industry is a meritocracy ready to reward anyone willing to work hard. In this way, participants defended the existing social structures that facilitated their current lifestyles, unsympathetic to those who faced barriers to working in these industries and blinded to the many feminized and racialized service jobs required to reproduce their lifestyles (Dorow, 2015). Indeed, though these feminized jobs like cooks and housecleaners are deeply implicated in a transition too, they have received comparably little consideration in just transition planning. But while identifying the way gendered and racialized structures shape how opportunities are made available to different groups, dismantling these structures requires us to take a step back.

As expressions of identities, masculinities are arranged in hierarchies that differ across context. Toxic masculinity, or toxic behaviors expressed by men in response to challenges in their status is more commonly expressed among subjugated masculinities as opposed to hegemonic masculinities (Messerschmidt, 2018). In Western climate politics, working-class masculinities are subjugated under more cosmopolitan forms of masculinity, such as those performed in the professional class. This subjugation is made evident through the popularity of stereotypes about working-class men, particularly those that associate working-class men, like fossil fuel fieldworkers, with climate denial, low intelligence, and blame them for the environmental impacts of their vocation. After all, the clear connection between fieldworkers and the environmental destruction inherent to fossil fuel extraction is difficult to ignore

when the connection is often made so visible. Fieldworkers are depicted covered in mud or behind the operating controls of heavy machinery. What makes a far less compelling image is those who sit behind a desk, equally engaged in work supporting fossil fuel extraction, but striking a less evocative image than someone wearing blue work coveralls and covered in mud. Even more obscured are those few individuals who actually control production decisions made about fossil fuel development, also almost exclusively white men (Carroll, 2017).

While this is not meant as a justification for the violence that does occur at the hands of working-class white men on other groups in society (e.g., National Inquiry into Missing and Murdered Indigenous Women and Girls, 2019), it is meant as a caution on placing the blame for climate change on white men as a broad group. Fieldworkers in the fossil fuel sector are not responsible for climate change in the same way no one consumer is responsible for climate change. Like most dependent on wage labor, they make choices about where they will work that provide the greatest opportunities relative to their skill sets. Understandably, they raise concerns when their ability to continue providing for their family comes into question, as it does with a transition. It becomes convenient to frame their concern about their material wellbeing as the source of political resistance preventing changes more broadly. But these class-based, gendered stereotypes about fieldworkers limit the very real possibility of class solidarity across professionals and fieldworkers.

The subjugation of working-class masculinities serves to support the hegemony of professional-class masculinities in climate politics. The office workers in this sample almost unanimously recognized the science of climate change, yet that did not change their choice of employment. Furthermore, as has already been noted, they did not feel like they were under a great deal of scrutiny because of their employer. Despite their equivalent role in fossil fuel extraction, the labor of office workers does not appear to invoke the same imagery as that of field-level workers.

The efforts of fieldworkers in the fossil fuel sector to defend their material well-being is part of a much larger problem, one embedded in the subjugation of the working class and the consolidated control over the means of natural resource production by a selected few. The defensiveness of status so evident in the industry culture of field workers is not exclusive to the field; it is simply more readily observable. Again, this is not to say that the day-to-day abuse that occurs on many fossil fuel sites as part of the hyper-masculine environment should not be of concern, but it is to highlight that to make strides towards a truly just transition, addressing the inherent material uncertainty faced by the working class will do more than upholding gendered stereotypes about who workers are and what they want. Creating trust among workers that a just transition would involve not simply them making the same wages as they currently are but would reduce the precarity of everyday life is of critical importance.

Conclusion

A just transition aims to address the impacts on labor groups from the decarbonization of the economy. As this research highlights, this is not the message that all fossil fuel workers are hearing. This research found that the industry's hyper-masculine environment did not undermine worker support for the transition. This problematizes existing research on masculine identities and resistance to transitions. However, perceived class-based gender stereotypes undermine the trust of fieldworkers that they will benefit from the transition. The tensions that emerged between professional-class climate politics and the identities of working-class oil and gas workers distract from the shared interest of both sides in achieving a sustainable future.

The fossil fuel sector has not been a reliable source of employment for workers since the crash of oil prices in 2014. Building community with impacted labor groups is critical to ensuring equitable futures for all. Future research should explore how community and trust can be built with those labor groups who are not unionized.

Chapter 4- Indigenous labor, land, and an anticolonial energy transition

Introduction

A just transition aims to address climate change without compromising social equality during decarbonization (Cigna et al., 2023). While early iterations of a just transition focused on ensuring affected workers would be supported, emergent visions of what a just transition could entail seek to resist the reproduction of harmful systems of power, such as capitalism and colonialism. A just transition is not a one-size-fits-all solution. A place's unique social and political context deeply influence the challenges that will be most prevalent on the path to decarbonization and the people who will be most impacted. How different actors interpret a just transition and attempt to secure their interests depends on who they are, their values, their position within broader social structures, and the future they envision for themselves. In other words, the identity of various groups matters immensely to how they navigate a transition.

Indigenous peoples are one group who has been incorporated as part of Canada's just transition legislation, the Sustainable Jobs Plan. The plan promotes "Indigenous-led solutions and a National Benefits-Sharing Framework" to ensure a fair distribution of the transition's benefits (Government of Canada, 2023: 20). Given the historical and ongoing legacy of colonialism, Indigenous peoples' participation is critical for ensuring the transition is truly just. However, simply acknowledging Indigenous peoples and Canada's legacy of colonialism is insufficient to resist the reproduction of settler colonialism as green colonialism. Instead, explicit attention must be turned to the subtle ways colonial hegemony is secured and normalized at various scales. This includes interrogating how policies or discourses that superficially appear to address colonialism still affirm colonial domination over Indigenous peoples and their lands (Coulthard, 2014). Examining how Canada's pathway to a just transition may be guided by a

colonial logic of domination and understanding how Indigenous peoples respond to and resist that logic is an important step in disrupting its advancement.

Existing literature on Indigenous peoples and a just transition includes case studies where Indigenous peoples oppose projects (e.g., Goldtooth, 2020) or are community partners in renewable energy projects (e.g., Amber et al., 2023). Several papers have sought to define what an Indigenous led just transition might look like (e.g. Alook et al., 2023; The Red Nation, 2021). Less explored is how Indigenous resource extraction workers stand to be impacted by a just transition. Certainly, a great deal of important work explores how Indigenous workers navigate work in the resource extraction sector and reconcile this work with their Indigeneity (e.g. SOURCES). However, given the economy-wide implications of a just transition and the emphasis the Canadian government is putting on Indigenous benefits from a just transition as a justification for the policy, there is a critical need for comprehensive research on Indigenous labour groups and a just transition.

To address this gap, I turn to a case study of the Tłı̨chǫ people from the Northwest Territories in Canada. The Tłı̨chǫ have navigated numerous transitions over the last 150 years. Like all Indigenous peoples in Canada, they have been forced to transition from their traditional, pre-colonial lifestyles to one marked by colonization and the various assimilation policies employed by the Canadian state throughout that period. Mining has occurred on Tłı̨chǫ land for the last century, from which the community saw little direct benefit. However, in the 1990s, diamond mining began in the Tłı̨chǫ traditional territory, marking a new era of resource extraction that would provide the Tłı̨chǫ with economic security. After 30 years, the diamond mines are now discussing closure, and so the Tłı̨chǫ are faced with yet another transition and an important question: What role should mining play in a Tłı̨chǫ future?

This question emerges at a time when Canada's Critical Minerals Strategy has turned the state's and investors' attention to regions rich in rare earth minerals (REM), materials central to decarbonizing

technologies. The Tłı̨chǫ land claim, situated along the Slave Geological Fault line, is one such region. As the Tłı̨chǫ face the closure of the diamond mines, they must decide whether their future involves taking advantage of the mineral resources on their land or whether they will seek out alternative futures. As the Tłı̨chǫ navigate this transition, they will also be navigating their identities.

Through 54 interviews with Tłı̨chǫ citizens and employees, this paper advances an understanding of the role identities play in navigating transitions. Specifically, I look at the formation of social and economic identities in an Indigenous community economically dependent on resource extraction. I argue that a broad social identity positions the Tłı̨chǫ to navigate transitions and exercise agency over a shared future.

I begin by situating this work within the context of the Tłı̨chǫ and the history of resource extraction on their territory. I review research on identity scholarship more broadly before delving into the connection between identities and resource extraction and reviewing work on Indigenous identities. I then outline how interviews were conducted and analyzed and the key findings.

Context

The just transition is positioned to have major implications for Indigenous peoples on whose land Canada's resource-dependent economy extracts value. However, this is not the first major transition Indigenous peoples in Canada have been a part of. Colonization has forced Indigenous peoples through countless transformative shifts. These transitions have drastically altered Indigenous economies and political and justice systems, stripping Indigenous peoples of access to their traditional lands. They have, therefore, deeply affected Indigenous identities.

The history of colonization is different in northern Canada than it is for much of the southern part. Due to the short growing season and rocky terrain, settlers did not initially seek to colonize the

North for homesteads (Hall and Pryce, 2024), using the North almost exclusively for the fur trade. As a result, many northern Indigenous peoples maintained nomadic lifestyles similar to their pre-contact ways for much longer than most southern communities (Hall, 2022).

This began to change in the 1930s when the promise of gold heralded a new set of Indigenous-settler relations (Hall, 2022: 55). The discovery of gold on the eastern shore of Yellowknife Bay led to the establishment of Con Mine, drawing settlers from the south to establish a small shanty town on the rocky lakeshore. Of course, the development of the mining-fueled city of Yellowknife was done without consultation with the local Yellowknives or Tłı̨chǫ Dene people.

The Tłı̨chǫ land claim, settled in 2003, covers a 39,000 km² region between Great Bear Lake and Great Slave Lake in the Northwest Territories. There are four communities within the land claim: Behchokǫ̀, the largest of the four; Whatì; Gamèti; and Wekweeti, the most remote community of the four and located the closest to the migratory corridor of the barren land caribou. Only Behchokǫ̀ and Whatì are accessible by an all-season road.

Settler-operated mines have historically depended on Indigenous labour like that of the Tłı̨chǫ, particularly for tasks like prospecting and constructing camps. By the 20th century, some mines in northern regions had a substantial presence of Indigenous workers (Keeling and Sandlos, 2015). For most of the 20th century, Indigenous participation in the extractive industries, such as the gold mining sector in the Northwest Territories (NWT), was characterized by temporary employment arrangements with few if any formal agreements with community leadership (Hall, 2022). However, the development of diamond mines on traditional Tłı̨chǫ lands in the 1990s ushered in a new era. The mining company met with the Tłı̨chǫ, negotiating impact benefit agreements (IBAs) that would serve as necessary economic support for the Tłı̨chǫ (Hall, 2021). Part of these agreements included the commitment to employ and train Tłı̨chǫ people and to mitigate the impacts on caribou from mining operations.

The diamond mines were developed through the center of the Bathurst caribou herds' migration route. Due to the cultural and subsistence importance of caribou, this risk to the herd was frequently raised in the impact assessment processes for the mines. Mitigation strategies were implemented to reduce the impact of the mines on the caribou and the environment more broadly.

Less than 20 years later, many of the promises have fallen through. The Bathurst caribou herd is perched on the precipice of extirpation, the mines have changed ownership multiple times, resulting in an erosion of the commitments made to employ and train Tłı̨chǫ employees, and the mines are discussing closure plans. This puts the Tłı̨chǫ, a relatively young government, at a crossroads. The economic stimulus provided by the diamond mines can no longer be guaranteed into the future, forcing the community to come to terms with what their future holds: more resource development or something else entirely.

The Tłı̨chǫ are pushed from many directions to continue to engage in mineral extraction on their territory. Their traditional lands are situated along the Slave geological fault line, a region rich in rare earth minerals that have been at the center of the energy transition. On the other, resource extraction threatens the ecological integrity of their land and risks driving the caribou to extirpation. How they navigate these changes will be heavily influenced by contestations about what the Tłı̨chǫ future should look like and how they envision themselves as a people in that future.

Literature

Indigenous Identities

Identity is a vital organizing element of social life. We use identity to construct meaning and negotiate ourselves in social networks (Brekhus, 2020). The drive for identity verification makes identities instrumental in how individuals and groups respond to new situations or changing circumstances. When an identity becomes activated, the meanings that surround that identity are used

as a standard for responses (Burke, 1991). The more identities one has, or the broader the meaning of a Master identity, the better positioned one is to weather significant social change as it is more likely that there are identities that are unaffected by events. Having multiple identities embeds individuals in multiple social spheres, providing better security and positive self-conceptualization (Carter and Marony, 2021).

Indigenous identities are “based on meanings and social practices situated in place” (Altamirano-Jimenez, 2013: 4). Though these meanings vary greatly, there is a tendency to treat Indigenous communities and their corresponding identities as homogenous in knowledge and values (Agrawal & Gibson, 1999). Such stereotypical framings of Indigenous identity transform indigeneity into a static, historically situated artifact with a “primitive relation to nature,” thus rendering them inert and a non-threat to colonial hierarchies (Altamirano-Jimenez, 2013: 72).

Indigenous identities are place-specific, shaped by colonialism's unique histories and localized legacies. They are defined in dialogue with or struggles against the colonial ‘other’ (Coulthard, 2014: 17). As such, indigeneity itself is a struggle (Alfred, 2005), one that seeks to move away from meanings imposed by colonial power (c: 169). Disrupting imposed meanings on Indigenous identity is important to disrupting the settler-colonial relationship, “where power has been structured into a set of hierarchal social relations that facilitate the dispossession of Indigenous peoples of their lands and self-determining authority” (Coulthard, 2014:7).

When colonial rule isn't primarily enforced through violence, it often seeks to maintain control by coaxing Indigenous people into accepting the unequal forms of recognition provided by the settler state (Coulthard, 2014: 25). In other words, the meanings of indigenous identities have become essential to defending ongoing colonial relations. The manner in which indigeneity is articulated, particularly how it positions the Indigenous subject with respect to colonial histories, significantly affects the

reinterpretation of both indigeneity and place, as well as the conceptualization of potential futures for Indigenous communities (Altamirano-Jimenez, 2013: 82).

To influence identity production, it is crucial to engage politically and intervene in the organization of knowledge (Mignolo, 2007). What Mignolo terms 'identity in politics' encompasses sites of contestation and the interactions between hegemonic and counterhegemonic discourses, as well as between forces and relations of domination, subjugation, and resistance. The control of identity and the restoration of human dignity involve intricate symbolic meanings, norms, and practices that are deeply embedded in sources of knowledge, social networks, economic relationships, physical environments, envisioned desires, and hopes (Altamirano-Jimenez, 2013: 169). By shaping indigeneity's meanings, the state reorganizes Indigenous self-determination to reproduce basic colonial structures and behaviours (Coulthard, 2014: 97).

Contemporary Indigenous identities have therefore emerged in response and resistance to colonialism, informed by their interactions with the culture and politics of colonization (Coulthard, 2014; Green 2009). Unique to many other social identities, the idea of “we” as it relates to indigeneity goes beyond the collective group, encompassing a responsibility to preserve one’s culture, traditional values, language, and stories (Alfred, 1995). Likewise, the self is not about individualism but rather how one remains interconnected with one's family, community, and people (Altamirano-Jimenez, 2013: 62).

Identity and resource extraction

Understanding how extraction influences individuals' identities is vital to mapping communities' responses to transitions away from resource extraction. Protecting material interests certainly plays a role in community loyalty to extractive industries, but it is an insufficient explanation for why communities become committed to industries. For example, scholars like Bell and York (2010) examine how resource development activities have become tightly integrated into the social identities of local

communities, referred to as economic identities. Despite the role of natural-resource extraction in the economies of affluent nations diminishing, rural communities historically dependent on industries like timber and mining retain an identity tied to these sectors. Extractive industries leverage this identity to maintain political influence and resist environmental and public health regulations.

Other scholars have focused on the gendered identities that form around processes of resource extraction. Much of this work explores the identities of men employed in hyper-masculine, natural resource environments and how these identities become dependent on these activities as a source of identity verification (e.g. Daggett, 2018; Hultman and Anshelm, 2017; Krange et al., 2019). Actions that call for disruption to these industrial or extractive activities are thus seen as an attack on the identities that have formed around them. Such actions may include calls for environmental protection or climate action. In any case, the frustration or shame of not being able to live up to models of masculinity tied to industrialism while feeling like it is expected serve as important footholds for supporting ongoing carbon-intensive development that preserves these identities and their status (Allen, 2022).

A significant body of scholarship highlights the connections between men and resource development, hypothesizing a connection between the domination of women and the domination of nature (Plumwood, 2018; Shiva, 1989 etc.). Other empirical work has demonstrated the feminization of environmental concern, whereby women are significantly more likely than men to express concern for the environment (e.g. Bush and Clayton, 2022; Davidson and Freudenberg, 1996, McCright and Dunlap, 2011). Literature has tried to explain the link between masculinity and environmental degradation as a matter of role identity, whereby men in their roles as fathers and husbands tend to internalize responsibilities associated with being economic providers for their families (Davidson and Freudenberg, 1996). In contrast, women internalize role responsibilities around care and ensuring the health and

wellbeing of their family. However, these gendered relationships with the environment are not universal, and do not apply to many Indigenous identities (Lorentzen, 2003) .

Resource extraction, particularly mining, typically takes place in rural, remote areas, on, at least in the Canadian context, Indigenous lands. Consequently, its workforce is disproportionately composed of individuals from Indigenous and rural backgrounds, making them more dependent on extraction as a principal source of wage labour (Hall and Pryce, 2024). However, most scholarship on identity and resource extraction has centered around settler communities, addressing Indigenous identities only to the extent that traditional lifestyles are undermined by resource development.

Indigenous identity and resource extraction

A key philosophical divergence observed between many Indigenous perspectives and Western liberal thought centers on differing conceptions of land (Antone, 2015; Kuokkanen, 2007). However, the colonial project works to dispossess land from Indigenous peoples and make it available to colonizers as a resource to be exploited for capital gains (Williams, 2021). While this initially took the form of overt violence to remove Indigenous peoples from their lands, it evolved by enforcing a colonial heteropatriarchal economy on Indigenous peoples.

The Canadian state uses the myth of a static 'traditional' identity to undermine Indigenous challenges to colonial rule. For example, Supreme Court of Canada decisions like R v. Van der Peet (1996) require Indigenous peoples to validate their rights by demonstrating that their cultural practices existed before colonial contact (Green, 2009). This mentality situates 'authentic' Indigenous identity in historical traditions, ignoring the reality of changes in identity and practices over time.

In response to critiques regarding resource extraction and its effects on Indigenous communities, the Canadian state has intensified its initiatives to train and employ Indigenous individuals at extraction sites (Bell, 2017; Hall 2021). This economic model emphasizes wage labour and the erasure of feminized

labour and subsistence activities (Hall, 2022). This also guided a shift from a matriarchal or care-focused economy to one of materialism (St. Denis, 2007).

Indigenous men face racialized gender discrimination, where they are depicted as being violent and prone to substance abuse problems, thus shaping the discrimination they face when obtaining and maintaining employment (Innes and Anderson, 2015). Indigenous women face different forms of gender discrimination. The Native Women's Association of Canada reports that Indigenous women face significant barriers to employment and advancement in the mining sector due to systemic and overt racism and sexism, harassment and bullying, sexual coercion, and violence (Bond and Quinlan 2018). Furthermore, employment in the sector for women tends to be lower-paying and temporary (PIWC Pauktuutit Inuit Women of Canada 2020). The out-of-town nature of most of the work in natural resource extraction tends to exclude women due to childcare responsibilities. Those caregivers whose male partners work in the mines face additional burdens of home and childcare (Carrington and Pereira 2011; Hajkowicz et al. 2011).

Cultural revitalization and the pursuit of genuine traditional and contemporary political and cultural expressions are influenced by mass media, global capitalism, identity and nationalist claims, and state hegemony (Hall, 2021). These influences impact Indigenous perspectives and choices, though not as unilaterally as they do within the dominant culture (Green 2003). Nevertheless, there is a potential for Indigenous resistance against state oppression and globalization, aiming not merely for assimilation into the monocultural state and capitalist system. This potential is rooted in the vibrant and compelling cultural ethos and identity that contemporary Aboriginal cultures offer as alternatives to the prevailing norms (Green, 2009).

The Tłı̨chǫ maintain a strong connection to the land and their traditional, land-based practices. Prior to colonization, the Tłı̨chǫ were nomadic, traveling through their traditional territory in small

family groups, following the seasonal patterns of the caribou (Walsh, 2022). While few Tłı̨chǫ now live full time on the land, travelling across the land is still central to situating Tłı̨chǫ ecological and spiritual knowledge and central to their identity (Andrews & Zoe, 1997; Andrews et al., 1998). Of particular importance remains their relationship to and harvesting of caribou. As already noted, the development of the diamond mines along the migration routes of the caribou has corresponded with a dramatic decrease in the herd's size. While the actual cause of this decline has been contested (Johnson & Russell, 2014), research has indicated that the caribou tend to avoid industrial development (Vistnes & Nelleman, 2008). The cultural impacts of being unable to harvest caribou are acutely felt (Wek'eezhii Renewable Resources Board, 2010), and yet, the Tłı̨chǫ remain economically dependent on mining. These tensions created by the mixed economy foster heated conversations within the community about what their priorities should be, shaped by claims of who they are and how they will position themselves in the future.

Methods

This research was conducted as part of a larger project, Advancing Impact Assessment For Canada's Socio-Ecological Systems, funded by the Social Science and Humanities Research Council and the Impact Assessment Agency of Canada. Ethics approval was provided by the University of Alberta Ethics Review Board Pr0Pro0012171 and Aurora Research License #17144.

A total of 54 semi-structured interviews were conducted by myself and my colleague, Lucas Schmaus. Participants were mostly Tłı̨chǫ citizens, though four were employees of the Tłı̨chǫ nation who had no Tłı̨chǫ ancestry. These four individuals were included because they had a comprehensive understanding of Tłı̨chǫ land management and development decision-making at the community and territorial governance levels. While all Tłı̨chǫ citizens were invited to participate, particular emphasis was

placed on including individuals who had taken part in previous impact assessment processes, who had worked in the diamond mines, or whose partners had worked in the diamond mines.

Participants were solicited directly by community coordinators, who reached out to citizens they believed may be interested in participating, and through open calls for participants. Open calls were distributed via posters placed in community gathering spaces and on community social media accounts.

This project involves interviews conducted over two field visits to Tłı̨chǫ communities, spaced five months apart. Most interviews took place in person, but 9 took place on the phone due to participant preferences. Interviews ranged from 30 minutes to 1.5 hours. The first ten interviews were conducted during the first field visit between November 2022-December 2022. The second round of interviews, consisting of the remaining 43 interviews, occurred in May 2023. The initial ten interviews took place in either Yellowknife, the capital city of the Northwest Territories or Behchokǫ̀, the largest Tłı̨chǫ community located an hour outside of Yellowknife. The second wave of interviews took place in Gamètì (9), Whatì (19), and Behchokǫ̀ (19). While interviews were planned for the fourth community of Wekweètì, scheduling conflicts disrupted our trip there. Completing interviews in Wekweètì remains part of the research team's commitment to the Tłı̨chǫ.

All participants were asked questions about life in their community, the effects of mining on the Tłı̨chǫ, climate change, and their outlooks on the future for the Tłı̨chǫ people. Individuals who had participated in past impact assessment processes on mines were asked about their experience being part of previous consultations. Those who worked in the mines were asked about their experiences being up at the mine, while their partners were asked about staying home.

Interviews were audio-recorded, transcribed with the help of a research assistant, and entered into NVivo. I then began initial open coding and sought to identify broader coding patterns that were suggestive of emergent themes, with a particular focus on identities and practices.

While a thematic analysis was used, it was done with reflexive attention to how the interview setting shapes the emerging themes, particularly those related to identities. Interviews are an interactive process where meaning is co-constructed by the interviewer and the interviewee (Cassell, 2005). Identities influence the relationships built between researchers and participants, and ultimately the data collected for analysis. (Razon and Ross, 2012).

As a settler, my own identity shapes the conversations that emerged between myself and participants (Kovach, 2009). Though the broader research objectives emerged from extensive conversations with employees of Dedats'eetsaa, the Tłı̨chǫ, and therefore reflect research priorities of the community, how my colleague and I were able to move through the interviews is nevertheless limited by the fact we are not Tłı̨chǫ. How participants interacted with us is thus reflective of our "Other" status as non-Indigenous, shaping how they would have answered questions (Merlan, 2009). Furthermore, location is important to Indigenous inquiries as it anchors knowledge in experience and therefore influences the interpretation of findings (Absolon & Willett,2005). While the findings of these interviews have been discussed with Dedats'eetsaa, they are nevertheless constrained by my positionality as a settler scholar.

Findings

In this section, I start by defining Tłı̨chǫ social identity that emerged from the interviews. I then delve into the experiences of Tłı̨chǫ individuals employed in the mines, focusing on how shift work affects both the workers and their families. I also explore the challenges that have arisen within the community as the mines begin to close. Further, I discuss the importance of intergenerational knowledge sharing among the Tłı̨chǫ. To conclude, I reflect on the community's outlook on the future of mining.

Tłı̨chǫ social identity

Almost unanimously across interviews, being Tłı̨chǫ was associated with speaking the language and participating in on-the-land activities, like hunting and fishing. Of course, underlying these two elements is the importance of the land to Tłı̨chǫ identity.

> *"Identity, people's identity, the (Tłı̨chǫ) language, the culture, the way of life... I think those are the strengths for community members and communities. Your identity is part in the land and the people and a combination" (Interview 1)*

One of the defining characteristics of Tłı̨chǫ identity is one of their guiding principles: Strong like two people. Chief Jimmy Bruneau originally developed this concept in the 19XXs to encourage Tłı̨chǫ young people to embrace the benefits of the contemporary world while holding onto their own cultural heritage and traditions. This concept emerged throughout the interviews, especially in response to the question of what made the Tłı̨chǫ strong.

> *"That's the mission that we still carry to this day. That all our students are strong like two people: strong traditionally and that they also understand the Western ways. They need a good head for management and finance so they can control all our business activities and we can generate our own economy and generate wealth while still maintaining their culture. That's the vision that they had, our Elders in the past. That's what we want to see for our future" (Interview 50)*

While this ethos came up in many interviews, the degree to which participants felt the Tłı̨chǫ should focus on one side or the other appeared to be a significant tension within the communities. Every participant stressed the importance of protecting their traditional culture, but what actions would best

position the community to do so remained contested. Some felt that the directions the community was taking sacrificed traditional ways of life in favour of Western lifestyles:

> *One of the problems that I noticed would be that we're living too white in a way. People say strong like two people, but there might be a little too much time spent on one. We are losing some of that traditional lifestyle (Interview 48)*

There was general agreement among participants that their ability to practice on-the-land activities is under significant pressure from resource development. One major concern brought up in most interviews was the decline in the caribou herds, a culturally significant animal who plays a central role in both traditional diets and cultural practices. Caribou herds used to be immense, covering most of the Tłı̨chǫ traditional territory. However, the decline in the Bathurst herd now forces hunters to travel further to hunt fewer caribou, imposing significant time and financial constraints on engaging in this critical cultural practice. This decentralizing of caribou hunting had a profound impact on cultural continuity for the community. As one Tłı̨chǫ employee noted:

> *A lot of people are concerned with how the mines impact the caribou. When people are not able to hunt, they don't have the ability to maintain that connection to the land and connection to the language, culture and way of life. You know, "What am I going to teach my children?" If I couldn't teach my daughter the stuff that's important to me, that's detrimental, right? And that's a real concern about the effect the mine has on the land, the wildlife and the ability to pass on those teachings about their language, which is connected to hunting and to travelling on the land. That whole cultural piece there is really missing. Because of the decline, there's a no hunting zone over caribou. So, people are not allowed to go out to these places anymore. I mean, you just disconnected a whole generation now. It's been almost 10 years that they're*

not able to go to these places and do what their culture tells them to do, and be who they're supposed to be. I think when it comes to wildlife management and environmental assessments, that's one thing we have not done well: really thinking about the social, the economic, and the cultural cost of the inability to hunt. Like if your grandparents and parents were great hunters, and then you're supposed to be too, but you're not able to. So, your identity…. you don't know who you are anymore, right? You kind of lose that identity. I see a lot of that, with people feeling like they're not who they're supposed to be. So they get really lost. And then it turns to alcohol, and, you know, all these other social problems, right? (Interview 6)

While the caribou were certainly the most frequently cited concern by participants, the impacts of mining on environmental health more broadly was also brought up. For example, many participants were concerned about the lack of reclamation of historic mines on Tłı̨chǫ territory. During their interview, one Elder gestured to a map on the wall, indicating all the areas within the borders of the Tłı̨chǫ land claim that the federal government had not ceded to the Tłı̨chǫ because they remained contaminated. These past reclamation failures, coupled with mistrust of the mines currently in operation created anxieties among many participants that the food and water on their land was no longer safe.

Behchokǫ̀ used to have Caribous crossing nearby that's already gone. Moose moved on too. And they figure it's because of the mine. Same situation with Gamètì, they're worried whether the water is good. The mining is going to affect their water, the environment, right? The fish, the birds and all that. I mean, no matter what, history has shown that whatever you're mining it has an effect on the environment regardless. They can't say they're 100% safe and clean yet. We all know it's false, right? (Interview 37)

Work in the mines

The mines are not only a source of environmental disturbance: they also serve as a valuable employer for many Tłı̨chǫ citizens. Concerns over the looming closure of the mines was front of mind for those currently employed in the mines and their families:

> *I'm trying not to depend on the mining so much. Because once it's shut down, then there's a big impact on financials. So right now, what my husband is doing is investing in more of his RRSP and investments with his funding from the mines. So that way, it's not impacting us majorly when it's completely done (Interview 22)*

Though the closure of the mines will have far reaching impacts, the relationship between the mining companies and the Tłı̨chǫ has been deteriorating for several years now. The original agreements with the diamond mines stipulated that a certain proportion of workers at the mine were supposed to be Tłı̨chǫ. As many participants noted, this was not how things worked in practice. While the early days of the diamond mines saw Tłı̨chǫ citizens hired on and trained as heavy equipment operators with good pay and a reliable pension, as the mines changed ownership over the years, the commitment to employing Tłı̨chǫ deteriorated.

Another issue faced by Tłı̨chǫ workers was the lack of transferable certifications. While workers may have worked their way up in the diamond mine, the certificates they received were only recognized for that particular mine site, posing a significant challenge for workers now facing unemployment from the closure of the diamond mines. The Tłı̨chǫ government has been working to shore up this human capital by providing training to citizens with transferable certification. But certifications don't necessarily mean that citizens receive good positions. More recently, many of the Tłı̨chǫ who have been hired by the mines were placed in lower-paying positions with limited potential for upward mobility, such as janitorial or general labour positions like wash bay attendants. Several employees shared that they experienced

varying degrees of harassment while at the mines. This ranged from microaggressions from southern co-workers to more overt discrimination from supervisors that had limited connection to their performance and more to do with their identity as Tłı̨chǫ.

Sometimes they are disrespectful because of our cultures and language… because we're Aboriginal people. Some people come from the northeast [of Canada] and they don't like Native people. And they think that we are savages and dogs, that we should never be involved in any kind of business. But you know, we own this land, 39,000 square kilometers land which we have fought for. And we own it, subsurface and surface rights and the water... it's ours. (Interview 34)

The white man is always ahead and Tłı̨chǫ is always the second (Interview 40)

Other participants focused on their enjoyment of working at the mines, sharing the comradery they experienced with their co-workers.

The biggest challenge participants who worked in the mine noted was the difficulty of the fly-in-fly-out work conditions. Common shift schedules include two weeks on two weeks off and three on one off. This is understandably hard on workers and their families:

You lose yourself a lot. The only focus you had was work. So that's kind of what happened to me, right? It's three weeks at work one week at home. You drink to party, go back to work and do it again. Right? The same freakin' routine (Interview 37)

We've been together for 20 years. And my son is 17. So my partner has been gone half of our son's life because he's only home two weeks in a month. It's a thing you have to get used to it. But you still don't get used to it, even 17 years later. You're still

like "Oh, geez, you have to go back to work again..." the hardest part is when he's not home for Christmas. And New Year's (Interview 22)

Work at the mine caused many citizens to miss their community and language:

[Working at the mine] changed my life. I appreciate my home more... holy like, and I appreciate...well, my language speaking more because I went from 80% to 100% speaking Tłı̨chǫ to a worksite that speaks no Tłı̨chǫ… And you just miss hearing your language. (Interview 39)

For others, being away from the community caused them to slowly become apathetic towards their community and cultural practices, not because they ceased to matter, but because being gone made it painful to continue to care at all:

But I didn't like it. Because I missed out on a lot. Because I was away and our people are much closer. My friend's parents died and my uncle died and I missed a lot of things. It wasn't just funerals. Missing out on the little events… it screwed me up. Now, I really don't care about events. That's one of the impact the mines had on me. I don't really care what's happening but I'll show up and be there when I'm there. But if I'm not, I'm not. Before it used to concern me a lot, missing out. (Interview 32)

I don't care about it. I don't care about stuff like that no more. Because I was there in the mine. I missed out on everything. So I don't care about stuff like that. I never do. My birthday? I don't care about my birthday. Christmas? I don't care about Christmas. I was just working, working working...that's it (Interview 40)

I think [my identity] changed because it was a disconnect. I missed lots of family things. I was gone half of the year. And I just felt disconnected from my culture, my

family, because anytime there was a culture event that's going on, and you can't attend because you're at work, or you're only there for part of the program, and the other half you're gone (Interview 46)

Discussion of the sacrifices made were often accompanied by justifications for why that wage was required in the first place. Living in community is expensive and participants emphasized the need to provide for their family:

Mining conflicts with Tłı̨chǫ culture because it takes our men away for two-three weeks at a time, sometimes even a month. And then like, like my partner can't even be a part of community hunting trips because it conflicts with his schedule, and then if it conflicts with his schedule, and if he wants to take time off then he can't get paid for it and if he can't get paid for it, then he can't provide for his family (Interview 54)

It's hard but I have to make a living to support them. I've been doing that since I was working up there. I have to sacrifice when I work out there to pay bills, to put a house over our heads and some toys here and there that we use to go hunting. (Interview 38)

Changes to how land-based activities were conducted, and the costs associated with these changes, were also barriers for people to get out on the land. The increasing use of fuel-intensive travel methods like snow machines, motor boats, and trucks required that one had access to capital to fund these expeditions. While more efficient than traditional methods, the dependence created on the wage economy to purchase fuel was a tension noted by many participants. To go on the land required money, but in order to make money, you needed a wage to fund those trips. These realities trap people between the time constraints of a job and the financial constraints of being on the land.

You need gas to get out there. And then you need gas for your ski-doos because you can't just go drive anywhere right, you need ski-doos. So usually when my dad goes, he brings a forty-five gallon drum of fuel. Just to go hunting for a couple of days (Interview 35)

Though sharing still played a role for the Tłı̨chǫ, the shift from a subsistence economy to a mixed economy that places a priority on wage labour seemed to correlate with reduced community cohesion. Interviewees discussed how people didn't connect with one another like they used to anymore:

You had Colomac and Lupin initially, the gold and silver mines, and then it transitioned into diamond mining. You can see the impact of it on our family because we stopped doing a whole lot of things all the time and did it only part time now. So, we could see there was a big change. I guess at the beginning of the 90s is when you started seeing that drop in a lot of things that families, our family and other families, used to do together all the time (Interview 8)

Intergenerational knowledge sharing

The other social disruption was that of inter-generational cultural knowledge sharing. Most participants noted a concerning gap between Elders who knew the Tłı̨chǫ language and land-based practices, and the youth who lacked fluency in these skills. While the history of residential schools and the Canadian governments explicit assimilation policies are certainly a factor in this breakdown of cultural education between generations, these gaps were further widened by parents, mostly fathers, absent while working in the mine.

It's still a male dominated workforce. So, when the dads and the uncles and sometimes the grandpas are going to these mines for two weeks, three weeks at a

time, that's two weeks or three weeks at a time that the younger generations aren't getting those teachings. It's also true that three weeks at a time the workers are not practicing their teachings. So, it all follows through with each other because they're not doing it as much, and when they get home, catch up projects. Try to do as much as you can... try to do what you need to, go where you need to, and then sometimes hunting just wasn't as important. But it still was so they fit it in and we do it seasonally. Some people do it all the time. We all used to do it all the time (Interview 8)

This has led to increased dependence on schools in Tłı̨chǫ communities to teach children the language and land-based skills.

The future of mining for the Tłı̨chǫ

Nearly every interview participant spoke about the economic importance of the diamond mines to the Tłı̨chǫ. A clear connection was made between mining and self-determination. This seemed to inform the sentiment among many of the 40-70 year old male participants that mining was therefore the only viable economic pathway forward for the community.

You want people to work? Look at our trees. Our trees are very short: there's no way we can get into the logging business. Do you want them to go commercial fishing? I don't... some people do, but we live out here, we don't want to do it because we're going to run out of fish, okay? And then what else? What other ways can we make money? You can't grow crops. It's all rocky country and it's cold. And... so what do we do? I looked at all that before... and, for us to make money... very little. The best thing we have is to mine... That's the only way I see us making money (Interview 3)

There were distinct generational differences in whether citizens agreed with this. Elders in their 80s who remembered living on Tłı̨chǫ land prior to most mining activities were the least supportive of ongoing or future mining. They felt that the mines had seriously damaged the land and that the economic trade-off was not worth it. Participants aged 40-70 were critical of previous mines for the damage they had inflicted, including the current diamond mines. However, male participants in this age group were the most optimistic that future mining projects could be done with minimal impact on the Tłı̨chǫ lands or ways of life.

> *Yes, I do support all the mining companies in our area, but it's got to be safe for like I said water and the wildlife and our land. Everything should be according to what it says on the agreement and I totally support it. It's a good job for the young people. Not many of the young people go on the land and they need a job, so I support that*
>
> *(Interview 19)*

Those who were more optimistic about the potential for mining to benefit the Tłı̨chǫ stressed the importance of greater Tłı̨chǫ involvement in the development process:

> *I wouldn't mind telling you that I do support the mines, I want the mine to be here all the time. And like I said, the trouble that we had [with the mines] was important: we learned over the years. I have a lot of information in my truck that I wanted to show you about abandoned mines. We never, never want to see that again. We'll work with the mine, they can mine, when they leave, they bring all the stuff out of there*
>
> *(Interview 3)*

> *You look for people with deep pockets that are willing to be innovative. And if you say, 'Well, we got all these deposits here. We want to partner up with you guys.' Then you got a partner who's got deep pockets and is willing to try innovative ideas that would*

have a limited environmental effect. Because they'll take those practices all over the world (Interview 9)

The majority of participants expressed varying degrees of resignation to the fact that there would be more mines. When asked if they would support future mines, some participants indicated that they were worried about the impacts from more mines, but felt that this concern was pointless because these projects would move ahead regardless.

I'm against it. Because you know, our wildlife, our animals are clean. We have see-through water. Like, it's so beautiful... but if it's gonna help our economy then what can we say? (Interview 22)

While the sample did not include many youth[4], the few who were interviewed expressed the greatest desire for a Tłı̨chǫ future that did not include mining.

I was thinking of working [at the mine]. But I don't know. I don't think that mining will be there forever. I'll probably just go back into school and not rely on the mining, and maybe I'll find my own passion. Because most people I know have been working with the mines for years. And then once there's no mining, then what are they going to do, you know?(Interview 31)

But the absence of alternative work opportunities raises big questions about where younger generations will find employment and the effects this will have on the Tłı̨chǫ. While the shift work

[4] In Tłı̨chǫ culture, youth is general used to refer to people under 30 years old. In this project, all participants were over 18.

required of the mines is difficult on employees and their families, it does still allow them to spend half their time in the community.

> *Tłı̨chǫ people, don't necessarily leave their community, leave their family, to move away somewhere else to work. So, it's going to depend on what is out here. And I think the youth will be the ones that are most impacted. They are the generation that might leave the community and move away to work elsewhere. I think that future generations... with all the knowledge they have, the social media, the technology, and I think... they are probably not going to be... they are probably going to be willing to leave their community to move elsewhere out of Tłı̨chǫ lands to work, and things like that, so. Then that will impact the youth or impact the communities when there's people leaving and the young people will leave, but not the older people. (Interview 1)*

Discussion

Social Identity and Natural Resource Extraction

Within the colonial context of Canada, Indigenous identities have been forced into a narrow standard of what constitutes 'traditional' Indigenous identities and practices. Tłı̨chǫ identities challenge the colonial assumption that Indigenous identities are situated in the past and are, therefore, antagonistic to contemporary forms of land use.

Tłı̨chǫ social identity is unique due to its ascription to "strong like two people." Through this conceptualization, Tłı̨chǫ can engage in both traditional on-the-land activities and extractive activities. Whether or not this broader understanding of Tłı̨chǫ identity would align with the Canadian state's understanding of Tłı̨chǫ identity is a separate question. It is important to note here how this broad social identity definition allows the Tłı̨chǫ to explore the economic options available to them through resource

extraction without irreconcilable identity conflict between their identity as Indigenous peoples and their participation in resource development. Granted, it also creates space for debate within the community about what this looks like in practice. However, by situating their social identity in relation to resource development and traditional practices, the Tłı̨chǫ are better positioned to weather economic and political disruptions. This is because having a broad understanding of a given identity embeds groups in multiple social spheres, providing better security and positive self-conceptualization (Carter & Marony, 2021).

This expansive social identity is not without its contradictions, however. Land-based practices and Western resource extraction emerge from two very different epistemologies, and their goals are not always complementary. For example, mining has contributed significantly to the decline in caribou herd numbers, an effect which has significant implications for the traditional, land-based practices of the Tłı̨chǫ. Additionally, participation in the wage economy makes it difficult for members of the community to find time to get out on the land. This disrupts not only their own participation in land-based practices but also undermines the education of younger generations in these traditional practices. Though the Tłı̨chǫ walk the line between two worlds under the ethos of “strong like two people,” it was evident from the interviews that traditional practices allow for the embodiment of their identity in unique and critical ways. While engaging in resource development on their land was conceptually included within their broadened social identity, it was clear that this was meant to support traditional practices, not threaten or overshadow them.

Tłı̨chǫ's relationships with resource extraction remain unique compared to most settler resource-dependent communities. For example, many resource-dependent communities express some form of economic identity that is entangled with local extraction or industry. Economic identities are born out of a combination of economic dependency, historical ties, and industry advocacy (Bell and York,

2010). In the case of the Tłı̨chǫ, there certainly exists an economic dependency on, and history of, mining. Nevertheless, while mining has been occurring on Tłı̨chǫ land for over 100 years and Tłı̨chǫ have technically been employed by the mines for almost as long, the realities of colonial resource development certainly do not inspire the same feeling of "friendliness" between mining companies and the Tłı̨chǫ as might be observed in settler communities (Bell & York, 2010; see also Snow et al., 1986). The realities of workplace discrimination, the abandonment of contaminated sites, and the ongoing failure of the current mines in the region to follow through on their promises are impossible for the Tłı̨chǫ people to ignore. So, though they may be economically dependent on mining, they certainly do not see themselves as dependent on mining companies to continue development within their lands. Almost all participants strongly believed that future projects must be subject to stronger agreements that protect the interests of Tłı̨chǫ land and people. In other words, though they have been forced into participation in capitalism, they seek to do so on their terms, guided by their connection with and commitment to their land. This problematizes the assumption that communities will identify with industries they are economically dependent on.

Gender identities and resource extraction

The gendered roles that emerge in the case of the Tłı̨chǫ also problematize how we think about gender identities and resource development. On the one hand, the participation in resource extraction among the Tłı̨chǫ mimics many of the gender dimensions we would expect to see in a settler resource-dependent community: men are the primary income earners who engage in mobile resource extraction work outside of the community, while women are more likely to stay home and take care of the children. However, even while engaged in mining, Tłı̨chǫ men and women appeared to take on a land stewardship or caretaker role. Most participants firmly believed that the health of Tłı̨chǫ land and people

was of the utmost importance, more so than the economy. The environment was not an afterthought: it was the number one concern and critical to securing Tłı̨chǫ traditional identity.

As most of the mine workers in this sample were male, many were navigating their role as fathers, which largely entailed a responsibility to be the primary economic provider in their families. No participants situated their role identity as a mine worker high in their identities salience hierarchy. This could be due at least in part to the discrimination that several participants noted about their experience working at the mine. After all, the activating of an identity like their Tłı̨chǫ identity is likely to result in closer associations with that identity (Carter et al., 2023). However, the commitment to holding down a steady job with good pay was always related to participants' roles as economic providers for their families. Life in Northern Canada is extremely expensive. Working in the mines is one of the few ways parents can make the wages necessary to afford a good life for their children.

The mentality expressed by Tłı̨chǫ miners speaks to emergent forms of breadwinner masculinities. Workers see migratory labour as a compromise they must reluctantly make under desperate conditions. They have to provide for their families. A breadwinner endures symbolic indignities to secure financial means to elevate the family's social standing, an unavoidable responsibility that entrenches inequitable gender relations (Broughton, 2008).

Labour mobility is relatively common in the natural resource sector, with fly-in-fly-out work being increasingly common. The challenges faced by families who have one parent engaged in FIFO work are not unique to the Tłı̨chǫ. However, many other social groups are not dependent on land-based practices for identity meanings like the Tłı̨chǫ and other Indigenous peoples. Land-based practices are critical to Tłı̨chǫ identity formation (Andrews & Zoe, 1997). The absence of parents engaged in wage labour from the household for weeks at a time disrupted their ability to practice their traditional ways and pass on this identity to their children. While the role conflicts between parents and employees were

expressed by participants who did not work in the mine, mine workers expressed the most alienation from their participation in family life and cultural reproduction.

This breakdown in the passing on of culturally significant practices has led to an expectation that the schools teach children culturally significant practices. This structural change imposed by the realities of life in the mixed economy (Hall, 2021) also alludes to changes in role identity meanings. For most participants, they spoke of the responsibility of the school to teach children land-based skills and the language. This was especially true among those who themselves did not know the language. This transference of responsibility from the role of parents to the role of educators in schools could be seen as a natural response of identity change due to conflicts between identity standards and behaviors (Burke, 2006). As parents are unable to meet this responsibility of their roles, they shift the meaning of their identities and that of educators to alleviate the negative emotions that accompany being unable to live up to traditional expectations of parental roles.

Future outlook for the Tłı̨chǫ

Although not primarily centered on the just transition, this research provides critical insights for incorporating Indigenous perspectives, particularly the Tłı̨chǫ, into just transition planning. The Tłı̨chǫ are in a somewhat advantageous position to benefit from the transition, primarily due to their control over mineral rights. Despite this, they face pressure to pursue development, with limited economic alternatives outside resource exploitation. This situation places them within the constraints of colonial capitalism, yet they are not entirely powerless within this framework. The Tłı̨chǫ strive to shape their destiny and steward their lands, leveraging their unique identity.

The Tłı̨chǫ draw inspiration from the words of Chief Bruneau, which affirm their ability to engage in mining and commerce while firmly maintaining their Tłı̨chǫ identity. This balance between succeeding in the Western world and preserving traditional culture is a source of pride for the Tłı̨chǫ community. It

fosters a sense of optimism that their dualistic approach positions them for greater success in both spheres. The broad definition of Tłı̨chǫ identity provides stability through which to navigate yet another transition.

The position of Tłı̨chǫ land within Canada highlights a disparity in access to services compared to other Canadian citizens, underscoring the importance of a just transition that considers the unique needs of northern and remote Indigenous communities. The concept of a just transition, initially focused on workers' rights amidst economic shifts, should be expanded to include Tłı̨chǫ citizens. These individuals deserve employment opportunities that allow for active community participation and do not necessitate prolonged absences from home, disrupting family life and missing vital cultural events. The discussion extends to labour equity within the community, emphasizing the need to ensure women have access to secure, well-paying jobs, critiquing the fly-in-fly-out employment model for its inequity. The dominance of the wage economy is already problematic, raising the question of what a care-focused Tłı̨chǫ economy might resemble—one that doesn't compromise the wellbeing of their land and people for financial stability.

Conclusion

The need to rapidly decarbonize our economy without reinforcing or exacerbating social inequalities presents immense challenges. Identities are hugely instrumental in shaping how various groups will navigate transitions, yet most scholarship has focused on settler communities impacted by decarbonization, ignoring the long history of Indigenous identities navigating transitions.

This research offers three main considerations for just transition and identity scholarship. The first is the importance of broad identity meanings for weathering significant social change. The broad definition of Tłı̨chǫ social identity serves as a critical point of resilience for the community as they navigate the closure of the diamond mines. While straddling both worlds to some degree, Tłı̨chǫ identity

is still undeniably rooted in their traditional, land-based practices. This provides an orientation for identity meaning that remains stable through the economic instability looming on the horizon.

The second is its problematization of long-prevailing assumptions about masculinity and resource extraction. By highlighting the ways Tłı̨chǫ men navigate their roles as environmental stewards, parents, and employees, this research emphasizes that changes in role identity meanings are not equivalent to changes in deeply held values. Instead, individuals navigate their multiple identities in salience hierarchies that shift across time.

Finally, if Indigenous peoples like the Tłı̨chǫ are to be included in a just transition, they should not be coerced into resource development because of economic precarity. For the Tłı̨chǫ to truly have the agency to pursue a just transition on their own terms, their decision to engage in resource extraction must be made based on careful community deliberation, not desperation. If the Canadian state truly values that Indigenous peoples are part of a just transition, instead of simply being cooperative with development due to the lack of alternatives, then providing support to rural Indigenous communities and their workers is a critical step moving forward. The environmental and social repercussions of mining should not be dismissed as a necessary sacrifice for Tłı̨chǫ sovereignty.

A truly just transition requires dismantling the green colonial narratives that mobilize the urgency of the climate crisis to justify pressures to develop resources on Indigenous lands. The demand for rare earth minerals (REM) extends beyond solving the climate crisis; it often aims to sustain affluent lifestyles in developed countries without considering the impact on Indigenous lands. However, the climate crisis, largely fueled by the colonial (and neo-colonial) endeavors of Western nations, does not legitimize forced resource extraction in other regions.

Conclusion

This dissertation has sought to better articulate identities' role in navigating the path to a just transition. I have approached this objective with a particular focus on labor, interrogating the way that gender, class, and Indigeneity inform these identities in relation to decarbonization. I have taken three different approaches to exploring this, represented in the three body chapters of this dissertation. Each chapter has taken a unique approach to exploring this inquiry, which allows me to capture better the breadth of identities and identity processes involved.

Altogether, this research resists structural arguments about what different demographic collectives want from a just transition to recenter an understanding of identities that acknowledges their dynamic and social nature. It emphasizes the instrumental nature of identities while highlighting how identities are not always antagonistic to societal changes. Three overarching questions guided this work, to which I now provide answers.

What relationship does identity have to either resistance against or support for transition?

This dissertation emphasizes the multiplicity of identity meanings, even within seemingly homogenous groups, and how this can result in diverse receptions to and interpretations of a just transition. Identities are not static. Instead, they shift in response to the surrounding social and political conditions. Indeed, individuals resist significant changes in identity meanings, but this does not mean that identities are impervious to changing social circumstances and the reorientation of meanings that may accompany them. Three themes emerged in response to this research question.

First, some identities are more relevant to transition discourses than others. In Chapter 2, I provide the concept of politically salient identities to capture that some identity groups are more instrumental than others in shaping public discourse on key issues. Though Chapter 2 deals almost

exclusively with this concept through the possibility of bots co-opting these identities, it is worth mentioning that this strategy can be employed by many other communication strategies for shaping broader discourses. For example, politicians, activists, and the general public draw on these politically salient identities to steer discourses on critical issues.

I argue that fossil fuel workers are instrumental to the energy transition. On the one hand, they are a group at the center of the majority of just transition policy as the group most obviously impacted by decreasing fossil fuel extraction. Conversely, the lifestyles associated with extraction roles resonate with much of the discourse of far-right populism. How fossil fuel workers' identities are perceived has immense implications for broader support for the transition. Identities are a vital organizing element of social life (Brekhus, 2020), and their meanings help establish our social positioning (Campion, 2019). Suppose the meanings surrounding fossil fuel worker identities are highly valued within a given social context. In that case, this creates an incentive to protect or reproduce the situations from which these identities emerge. To have the archetype of the hardworking, blue-collar worker, you need the industrial setting from which he emerges to remain intact. As a result, shaping the meanings of salient identities like fossil fuel workers helps situate the relative status of fossil fuel energies more broadly.

This contestation over worker identity meanings is not one-sided. From its earliest iterations, a just transition has taken up the meanings surrounding mostly blue-collar workers to demonstrate how they can be reproduced in new contexts. Even the Government of Canada's Sustainable Jobs Plan focuses heavily on messaging that clarifies how existing worker groups will benefit from new or ongoing employment with the transition. In other words, they should not feel threatened by the transition, though it will mean employment in a different industry from fossil fuels. What this affirmative framing of a just transition fails to address, however, is how the meanings of these identities emerge from ongoing

colonial relations. In seeking to assure new employment for affected workers, how is the colonial project's pursuit of land and resources further justified?

Chapter 4 with the Tłı̨chǫ also furthers this consideration of politically salient identities. On the one hand, the fates of Tłı̨chǫ workers and their families are a significant concern within the community as the diamond mines face closure. After all, employment in the mine serves as an essential part of the mixed economy for Tłı̨chǫ. On the other hand, workers are also critical to the reproduction of Tłı̨chǫ culture, and their absence from community life to work in resource extraction carries significant implications for the passing on of cultural knowledge to the next generation.

The second theme that emerged around the relationship of identity to resistance or support for the transition was how stereotypes about identity groups can create resistance to a transition by initiating identity defense. Chapter 3 demonstrates how class-based gender stereotypes create identity defense among field-based fossil fuel workers. I argue that these stereotypes allow those who have influence over fossil fuel production decision-making to avoid accountability while focusing blame on a group of workers primarily motivated by economic opportunities. The identity mechanisms behind identity defense are discussed in greater detail in Chapter 2.

The third theme is that having broad identity definitions better positions social groups to navigate transitions. In Chapter 4 I discuss how the Tłı̨chǫ have an expansive social identity, one that allows them to engage in the mixed economy without identity conflict. This broad identity allows the Tłı̨chǫ to consider a future with greater control over resource development on their land, while still living up to their relationship with the Land. In particular, they are able to see a pathway forward guided by their shared values and commitment for clean water, healthy animals, and community well-being.

What role does livelihood actually play in identity?

In interviews with fossil fuel workers and Tłı̨chǫ mining workers, few participants expressed a strong commitment directly to their role identity as a resource extraction worker. Most workers were committed to other identities they held that could be verified by working in resource extraction. For example, this work allowed fossil fuel workers and Tłı̨chǫ miners to verify their role identities as economic providers for their families. However, there was also conflict with other identities. For example, while working in the mine helped Tłı̨chǫ miners verify their role as economic providers to their families, this came into tension with their responsibility as parents to pass on cultural knowledge and land-based skills to their children. Workers were forced into a form of breadwinner masculinity, where migratory labor was an undesirable compromise to elevate their family's social standings (Broughton, 2008).

While role identity was not necessarily high in the salience of many fossil fuel workers, employment was an important source of pride, which factored heavily into how many of them conceptualized masculinity. Being able to live up to that gender identity was entangled with their financial success, something they were adamant about preserving through a transition.

How might we mobilize the values expressed by extraction workers to support, rather than resist, transition?

Trust emerges as a critical factor for building solidarity during a transition. In Chapter 2, I discuss the potency of outgroup identity dynamics, demonstrating how our tendency is to align ourselves with the groups we belong to, fostering mistrust with those we do not share an identity. This exacerbates group differences rather than creating alignment over shared values and goals. In Chapter 3, I discuss how class-based gender stereotypes about fossil fuel workers and the lack of a cohesive transition plan of action undermined workers' trust that they would be taken care of by the transition. In both cases, a

lack of trust that their well-being would be a serious consideration through a transition impeded broader support.

Trust also emerged in the Tłı̨chǫ case study, though it was related to how trust had been broken between the Tłı̨chǫ, mining companies, and the Canadian government. The original agreements between the Tłı̨chǫ and the diamond mines laid out explicit Agreements regarding Tłı̨chǫ employment and skills development, which had slowly eroded over years. As a result, this motivates the Tłı̨chǫ not to put their trust in the hands of another mining company. Instead, they look to exercise agency over their own land and to take a leadership role in resource development.

In Closing

The climate emergency continues to demand our attention. Following the record-breaking fire year across Canada in 2023, few Canadians can say they remain unshaken by the abnormal weather conditions. Whether they contribute these events to climate change or not is nevertheless not a requirement for people to recognize that the status quo is becoming increasingly precarious and something needs to be done.

As I have argued throughout this dissertation, identities matter for a just transition. However, how they shape the pathway to a transition and what that pathway might look like are more complicated than much just transition scholarship has recognized. This presents several pathways for future research. Specifically, building on my work on extraction workers as politically salient identities, future work should examine what kinds of work are being prioritized in just transition planning and what identities are positioned to fill these future job roles. Are gendered conceptualizations about what types of work count as 'real work' disproportionately guiding just transition planning? Is this serving to prioritize the needs of white men in the working class over other demographic groups like Indigenous peoples? These are important gauges for whether our path toward decarbonization centers on equity and justice.

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