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Mémoire par article intitulé
**L'uranium au Québec: l'influence des techniques de neutralisation sur le
débat**

Présenté par
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« À ma grand-mère »

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Résumé

Ce mémoire examine l'évolution controversée du développement de la filière uranifère québécoise. L'incertitude du marché de l'uranium ainsi qu'une mobilisation d'opposants face à l'uranium dans la province a précipité le débat sur l'exploitation de l'uranium au Québec. Cette étude se focalise sur le projet d'exploration uranifère le plus avancé dans la province. En fonction d'une analyse du contenu des rapports annuels et des communiqués de presses de l'entreprise, ainsi que les articles pertinents des journaux, cette étude identifie quatre phases qui animent la controverse. L'étude identifie six techniques utilisées par l'entreprise afin de justifier et défendre ses intérêts au long de la controverse et permet de mieux comprendre les stratégies employées par les entreprises minières afin de légitimer leurs positions lorsque l'engagement des parties prenantes ne suffit pas. Cette étude contribue à la littérature concernant les stratégies de neutralisation en démontrant l'emploi de ces techniques et leur évolution lors du débat du développement des mines uranifères au Québec. Les résultats de cette étude permettent également de mieux comprendre l'évolution du rôle des gouvernements dans le développement de nouveaux projets miniers.

Mots clés : Uranium, Développement minier, Techniques de neutralisations, Controverses

Abstract

This thesis studies the controversial evolution of uranium development in Quebec. Uncertainty surrounding the uranium market and mounting opposition towards uranium in the province led to controversy surrounding uranium mining in the province. This study focuses on the most advanced uranium exploration project in the province. Based on the content analysis of company annual reports, official company press releases and newspaper articles, this study identifies four phases which characterized the controversy. The study identifies six techniques used by the company to justify and defend its interests over the course of the controversy and develops a better understanding of the strategies used by mining companies to legitimize their positions when their efforts to engage stakeholders lead to mixed results. The study contributes to the literature on neutralization strategies by demonstrating the use of these techniques and their evolution during the controversy surrounding uranium development in Quebec. This thesis also highlights the evolution of the role played by governments during the development of new mining projects.

Keywords: Uranium, Mining Development, Neutralization Techniques, Controversy

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General Introduction

Uranium is a naturally abundant radioactive metal whose primary civilian use is as a fuel in the generation of nuclear energy (Degueldre, 2017). As a result, uranium mining is inextricably linked to the nuclear energy industry. The success of the uranium mining industry is almost wholly dependent on the continued global demand for nuclear energy. Thus, the primary issues facing uranium mining are the concerns regarding its association and use within the nuclear energy industry (Mudd, 2014).

Nuclear energy has been a contentious issue for many decades now and has especially been brought back to the forefront in recent years. This increased prominence is due to both the heightened focus of government policies, as well as a re-evaluation of policies following the 2011 nuclear disaster in Fukushima, Japan. Bratt (2014) explains that the principal drivers for the global renaissance of nuclear energy, are governments' response to the increased demand for electricity, the goal of mitigating climate change and the pursuit of energy security.

Uranium reached a peak market price of approximately USD140\$ per pound in 2007 due to an imbalance between the demand for uranium and its availability (Bureau d'audiences publiques sur l'environnement, 2015; Kim et al., 2017). Since that period, the price of uranium has steadily decreased, reaching USD40\$ per pound in 2015 (Kim et al., 2017). Despite this, the global demand for uranium is rapidly increasing as 89% of the fuel requirement of nuclear reactors is to be met by uranium. Currently this represents 377 million pounds of uranium ore annually (Hackley and Warwick, 2015). The long-term outlook for the uranium industry remains positive despite current uncertainty (BAPE, 2015; Hackley and Warwick, 2015; Kryzia and Gawlik, 2016).

Canada is currently the world's second largest producer of uranium, accounting for over 15% (Natural Resources Canada, 2014) of the total global output, with uranium mining being concentrated in Saskatchewan. The province produces annually over 9000 metric tonnes of uranium ore (Vestergaard, 2015). Canada is expected to continue to play a significant role in meeting future global demand for uranium (Hackley and Warwick, 2015). In Quebec, increased uranium exploration had been underway in the mid to late 2000's given the rapid rise in the value of uranium.

The prospect of uranium mining in Quebec has been a contentious issue, with both many proponents and detractors of the uranium industry. Despite having relatively modest estimated reserves of uranium ore at 8800 metric tonnes scattered throughout the province (Vestergaard, 2015), the province saw an increase in exploration activities surrounding uranium between 2007 and 2009. This coincided with a rapid increase in the global price of uranium and a focus by governments to reduce dependency of fossil fuels to satisfy energy demands (Bratt, 2014). Due to heightened public scrutiny surrounding the prospects of uranium development in the province, in 2013, the provincial government suspended uranium exploration and other uranium mining related activities in the province pending a longer environmental assessment. Quebec became the third Canadian province to impose such moratorium, joining British Columbia and Nova Scotia (Vestergaard, 2015). Elsewhere, the American state of Virginia has also had a longstanding ban on uranium mining (Fiske, 2012).

The independent provincial environmental evaluation agency, Bureau d'audiences publiques sur l'environnement (BAPE), conducted year-long public consultations on the prospects of uranium development in the province of Quebec beginning in May 2014. In its final report, presented in the spring of 2015, the BAPE maintains that there was no social acceptability for uranium mining to proceed in the province and that it would be premature to authorize any uranium development in the province. Given this conclusion, the government has not yet decided to authorize any uranium project and it is unclear if it ever will.

One of the casualties of the debate surrounding uranium development in Quebec was the Matoush project, promoted by Strateco. Over the lifespan of the project, the company invested over CAD190\$ million on the project (Strateco, 2015), obtained its advanced exploration license from Canada's nuclear safety regulatory agency and was even promoted as part of Quebec's Plan Nord. Despite all of this, the Matoush Project became embroiled in controversy and the mine never came to fruition. Instead, the company took legal action against the provincial government for a sum of nearly CAD200\$ million for its loss of investment, claiming that the government had acted inappropriately (Strateco, 2014a; Strateco, 2014b).

The BAPE's final report, confirms that stakeholders had a considerable influence on the future of the development of uranium in Quebec. This thesis interests itself on the evolution of the uranium

mining debate in the province and the evolution of the interaction between the industry and its stakeholders over the course of the debate. The objective of the study is to assess some of the strategies used by mining companies to defend their interests and legitimize their actions during on-going, long-term controversies surrounding projects.

Assessing the development of uranium in Quebec by studying an exploration project such as the Matoush project is especially pertinent in natural resource policy since mineral exploration is crucial in the mining cycle as it is the first time a company has contact with local stakeholders and initiates the fostering of relationships with them (Eerola, 2013). Understanding the dynamics between the uranium industry and its stakeholders is relevant given that uranium mining is widely feared and misunderstood and continues to be accompanied by significant on-going and emerging conflicts (Falck et al., 2015a; Falck et al., 2015b). The Matoush project controversy presents an example where some of these factors may have been at play. While, the development of uranium in Quebec presents an example where the convergence of the importance of stakeholder engagement by exploration companies is contrasted with the general misgivings surrounding uranium.

The rest of the thesis is organized as follows. Within the first chapter, there is a section dedicated to a review of the literature concerning issues surrounding uranium mining, nuclear energy development and the history of uranium development in Canada and Quebec. Next, the research objectives, the conceptual framework and research methodology are presented. The second chapter is entirely devoted to a scientific article on the neutralization techniques employed during the controversy surrounding uranium development in the province. Lastly, the general conclusions will be discussed.

1.1 Literature review

This literature review is subdivided in four sections. The first section acts as a summary of recent public perception of nuclear energy following the 2011 Fukushima disaster in Japan and governments' policy responses to the new realities facing nuclear energy. The second section gives an outline on the recent contributions within the literature concerning the uranium mining industry. The third section discusses the scholarly work done concerning the relationship between stakeholders and the uranium industry. The last section gives a contextual overview of the history of uranium mining in Canada and Quebec.

1.1.1 Perspectives on nuclear energy since Fukushima

Following the Fukushima nuclear disaster in 2011, the debate surrounding nuclear power has been reignited and has broadly affected the growth of the nuclear industry and has caused many countries to revisit their nuclear policies. Ming et al. (2016) describe four general policy positions among countries regarding nuclear power since the Fukushima disaster. The positions are simply continuing development of nuclear power, making use of existing nuclear power, the phase out of the nuclear industry and the phase down of the nuclear industry. Not many countries have proposed to reduce and remove nuclear power, with Japan and Germany being the most notable exceptions. In fact, most countries have continued to foster their nuclear industries and many emerging countries have accelerated the development of their nuclear industries as well. Large producing countries such as Canada, the United States, France and Russia have continued to develop nuclear power and are expected to continue their previous nuclear power development plans (Ming et al., 2016).

Latré et al. (2017) found that in most major nuclear power generating countries analyzed, public support for nuclear decreased following the Fukushima disaster. The paper evaluates several variables and how they may have influenced the nuclear debate in recent year. Factors such as the geographic location of a country, its nuclear energy production, if a country was already planning the construction of nuclear power plants prior to the Fukushima disaster and the freedom of the

press were all considered. The study also notes a discrepancy between countries in terms of the rate of reduction of public support. However, the authors challenge the extent to which the national context moderated the debate and public discourse in these countries, which has been previously argued in the literature (Latré et al., 2017).

While Latré et al. (2017) find that contextual factors do help to explain the differences in the absolute level of support for nuclear energy; they only have limited value in explaining the differences in opinion changes amongst countries following the Fukushima disaster. This conclusion differs from the findings of the Kim et al. (2013) paper, where the authors argue that the impact of the Fukushima disaster on public perception of the nuclear industry was dependant on national contexts. Nevertheless, both papers recognize that nuclear accidents do have an important influence on public perception of the safety and reliability of the nuclear industry (Kim et al., 2013; Latré et al., 2017).

Kessides (2012) argues that while the nuclear industry was already facing many challenges before the Fukushima disaster, including a decreasing level of public confidence in the safety and reliability of nuclear power, this was accelerated following the disaster. It is argued that Fukushima will raise the stakes for advocates and detractors of the nuclear industry. The paper also argues that while public opinion is shifting more and more against nuclear power, it would be premature to conclude an imminent end to nuclear power (Kessides, 2012).

1.1.2 Outlook on the uranium industry

The Mudd (2014) paper assessed uranium resources and mining, and the role uranium will play in the future. The paper provided an extensive review of the mining and milling of uranium ore in the context of a perceived future increase in nuclear power. Relatively speaking, uranium mining represents a small area of the global mining industry. It is, however, considered a major strategic asset due to being intimately linked to the national security and energy independence of many countries. Mudd (2014) concludes that the primary issues facing uranium mining will continue to be the divisive nature of the nuclear debate and all it encompasses. That is the concerns related to nuclear weapons, the overall safety of nuclear reactors and the long-term ability to effectively manage nuclear waste, as well as the successful remediation and rehabilitation of mine sites according to various stakeholders (Mudd, 2014).

Graetz (2014) argues that while it is important to draw a distinction between the activities of the uranium industry, be it exploration or exploitation, and the end use services of the nuclear industry attitudes towards the perceived risks of the end use services can and do influence perceptions of risks associated with mining or exploration. This phenomenon manifests itself through the critiques of the uranium industry which are often emotive political debates focusing on the commodity, drawing in a range of political actors such as non-governmental environmental organisations and anti-nuclear groups. Furthermore, it is argued that the conflation of uranium industry with the nuclear industry have helped to foster perceptions of heightened risk associated to uranium mining among the public (Graetz, 2014).

The demand for uranium is a topic that is of much interest for all stakeholders alike and has been continuously discussed within the literature as it is an important consideration regarding policy decisions. Mudd and Diesendorf (2008) argue that while, the extent of economically recoverable uranium is linked to exploration, technology and economics, and it is also increasingly linked to social issues. Amongst these issues are environmental costs such as energy, water and chemical consumption in the mining process, greenhouse gas emissions from uranium linked activities and other broad social concerns (Mudd and Diesendorf, 2008).

The outlook on the demand for uranium is a topic which has been the focus of many studies. The availability of uranium has a direct impact on global capability to sustain demand for nuclear power (Monnet et al., 2017). Mendelevitch and Dang (2016) investigated if global uranium resources and reserves will be sufficient to satisfy the projected demand for nuclear power in the future. There is an unpredictability associated with forecasting what demand for uranium will be down the road and depending on the model used, different conclusions can be made. However, generally, it is accepted that uranium scarcity is not likely to be an issue for the foreseeable future (Rooney et al., 2015; Mendelevitch and Dang, 2016).

On the issue of the environmental impact of uranium mining, Schneider et al. (2013) analyzed through mathematical models the use of energy, water and land within the uranium mining process. These metrics are considered paramount in evaluation of the environmental impact of uranium mining. Overall, through various mathematical models, the paper argues that uranium mining will become more energy efficient in the future, which may reflect technical learnings and increases in

mining productivity. The paper concludes that based on its energy intensity analysis, that the energy efficiency of uranium mining is considerably higher than many previous estimates. Furthermore, it appears that uranium resource will constrain nuclear energy decisions for the next century (Schneider et al., 2013).

Detractors of uranium mining often argue that there are elevated amounts of risks associated to uranium mining activities, such as health and environmental risks. Many studies have attempted to determine the effects of uranium mining on human health and the environment (e.g. Carvalho and Oliveira, 2007; Carvalho and Oliveira, 2008; Lottermoser, 2010; Bjørklund et al., 2017). The release of uranium and its decay products into the environment, the air, soil or water can pose threats to human health. Uranium can enter the body primarily by inhalation, ingestion or transdermal absorption (Katz, 2014). Major health concerns can be categorized by the health and safety concerns of miners and mine sites, the health and safety of people living in the immediate vicinity of mines' tailing ponds and their potential radioactivity, and the health effects of increasing background radiation and water contamination (Dewar et al., 2013). One of the primary health concerns associated with uranium mining is the exposure to the carcinogenic gas, radon (Graetz, 2014). Many doctors advocate for an increasing sensitivity of the potential health risks associated with uranium mining (Dewar et al., 2013). Furthermore, an increasing number of healthcare professionals oppose the mining of uranium, stating numerous health concerns associated to both the generation of nuclear energy and the exploitation of uranium (Dewar et al., 2013).

Differing from many other mining activities which encompasses increased chemical toxicity, uranium mining presents both an increase in chemical and radiological toxicity (Carvalho and Oliveira, 2007; Lottermoser, 2010; Haalboom, 2016). As with other mining processes, uranium mining could lead to the contamination of groundwater and soils, and by consequence may negatively the growth of the microbial community, plants and animals (Abdelouas, 2006; Carvalho and Oliveira, 2008). The effects of uranium mining tailings on the environment have been also discussed within the literature. Tailings have been found to leach by groundwater and contaminate water sources nearby with elevated levels of radiation (Peterson et al., 2008; Sharma, 2008).

Bjørklund et al. (2017) overviewed many major studies conducted over the years pertaining to human exposure to uranium in the environment. The paper highlights the link between the

geological distribution of uranium and its impact on human health. The survey concludes that despite some of the concerns expressed in the literature, there is no scientific consensus on the health impacts of uranium mining on human health, as several aspects related to uranium are still not well known. Further research is thus required to fully understand what effects or risks may occur do to human interaction with elevated levels of uranium (Bjørklund et al., 2017). Other studies in the literature also draw the conclusion that the health impacts of uranium on human health are unclear and require further investigation (Wagner et al., 2011).

The public's attitude towards nuclear energy and the mining of uranium manifests itself through the dynamics of the relationship amongst stakeholders. Many of these issues discussed in this section of the literature review have become paramount to the way the uranium industry is perceived by stakeholders and how the industry attempts to engage with its stakeholders. In addition, governments must also consider these factors when deciding upon the development of uranium.

1.1.3 Uranium industry stakeholders

This section will elaborate more specifically on the relationship between uranium mining companies and the some of the primary stakeholders they interact with, such as concerned citizens and activists, governments and First Nations. These parties represent the large part of the uranium industry's stakeholders. The Stakeholder engagement undertaken by companies within the uranium industry has been a topic which has received recent attention within the academic literature (e.g. Eerola, 2013; Ziessler et al., 2013; Henisz et al., 2014; Falck et al., 2015a; Falck et al., 2015b; Eerola, 2017). Stakeholders can be defined as individuals or groups who have tangible or claim to have an interest in a project (Falck et al., 2015b). Colvin et al. (2016) define stakeholders as formally affiliated groups with a collective interest and shared preferences. For stakeholders to best influence decisions on uranium mining, (Falck et al., 2015a) argue that the messages of stakeholders involved with projects must be timely, consistent between different actors and realistic.

The distinction between public participation and stakeholder engagement is increasingly reflected in the academic literature where stakeholders represent entities which are clearly differentiated from the public (Colvin et al., 2016). This is based on the expectation that stakeholders represent

specific interests. This is in contrast with citizenry, which holds the public good as its central interest. As such, Colvin et al. (2016) explain that stakeholders tend to be defined as formally affiliated groups with a collective interest and shared preferences.

Falck et al. (2015b) discussed the interaction between stakeholders and the uranium mining industry and explain that they can be grouped in several ways according to the interests they are likely to represent. The dynamics of evolving stakeholder positions is especially unique within the uranium industry. One particularity of uranium mining is that it attracts significant interests from external stakeholders such as activists, more so than other mining industries (Falck et al., 2015b). This is due to the inextricable link between uranium mining and the nuclear fuel supply chain (Falck et al., 2015b). In such case, both stakeholders interested in the exploitation of uranium and those interested in nuclear energy converge towards the same focal point.

Generally, stakeholders are primarily concerned about the environmental and the socioeconomic impacts associated with uranium mining projects, well beyond the active lifetime of a mine (Falck et al., 2015a). As for the role of the government, it is generally ambivalent. On one hand, the government may promote mining for economic benefits, but must also balance this with its responsibility to manage expectations among all stakeholders and to protect them from potential environmental, health and socioeconomic risks. The government may also need to mediate between stakeholders with diverging interests. It is thus imperative that the government's role and position be clear and transparent to all stakeholders (Falck et al., 2015a).

First Nations represent one of the key stakeholder groups within the uranium industry, as they have been historically linked in the development and exploitation of uranium. This is largely because approximately 70% of the world's uranium is located on or near First Nations' lands (Graetz, 2015). While indigeneity and extractive industries are framed as incompatible and in direct opposition of each other, Procter (2016) argues that the relationship between the two is far more complex. In this case, the author examines the prospects of uranium development in Labrador, Canada. It is argued that over the course of time, extractive industries and indigeneity have developed in tandem as the two influence one another (Procter, 2016). Thus, the mining industry acknowledges the capacity of indigeneity to challenge and obstruct large mining projects, and as a result, gives attention to gain indigenous approvals for its projects (Procter, 2016).

The engagement and fostering of relationships between industry and First Nations can thus be a challenge. Graetz (2015) identified some common concerns expressed by First Nations with respect to the social impact the exploitation of uranium on their lands has on their communities. Often because of past experiences, there are perceived additional risks associated with the extraction of uranium which does not manifest itself with the extraction of other extractive industries. The main concerns discussed are radiation contamination of land and water, as well as the overall health impacts, the recognition and respect of community rights, future land access and the association of the use of uranium in nuclear technologies (Graetz, 2015).

The Graetz (2014) paper argues that First Nations' experiences with social risks provide ground for the opposition of potential uranium mining projects. This can pose risks for uranium companies. As a result, it is argued that through more respectful engagement with First Nations, uranium companies can reduce business risks. The opposition of First Nations of uranium development can draw in multiple actors and often result in local campaigns transforming into national and international debates quickly (Graetz, 2014). However, in major uranium producing countries such as Australia and Canada, an ongoing improving of relationship between industry and First Nations has permitted further development of uranium resources with renewed community acceptance.

Wiles and Sadar (1999) and Haalboom (2016) discussed the use of traditional knowledge and its reconciliation with scientific knowledge in environmental governance of uranium mining in Saskatchewan, Canada. In both papers it is argued that traditional knowledge in environmental assessments are employed predominantly on technical grounds rather than social and cultural components. That is there is a perceived lack of coherence between traditional knowledge and the environmental management of resource extractive industries. This leads to a discrepancy in power between First Nation communities and governments and industry (Haalboom, 2016).

The experience of First Nations in Saskatchewan with respect to confronting risks has also been discussed by Haalboom (2014). In a 2014 case study, evaluating the participation of First Nations in the environmental governance of lands near uranium mines, it is argued that provincial risk assessments were presented in ways which presented resource development as safe, responsible and inevitable, thus advancing political and economic interests. However, many First Nations

expressed a different perception of risks associated with uranium development by asserting knowledge of global technological failures and local conditions associated with the exploitation of uranium (Haalboom, 2014).

1.1.4 Uranium history in Canada and Quebec

Uranium mining history in Canada dates to the 1930's when the Eldorado mining company began operations at its Port Radium, Northwest Territories mine (Garbutt, 1984). However, the discovery of uranium in Canada occurred much earlier, during the mid-1800's. The Allied nuclear weapon program, the Manhattan Project, dramatically increased demand for uranium during the Second World War and would coincide with the discovery of uranium deposits in northern Saskatchewan, along with uranium deposits in northern Ontario that would springboard the Canadian uranium mining industry after the war (Garbutt, 1984).

The strategic nature of uranium manifested itself through the race towards nuclear armament and the start of the Cold War, as well as Canada's close relationship with the United States incited the federal government to facilitate the expanded development of the uranium mining industry and until the late 1950's, uranium's principal use was for military weapons (Garbutt, 1984; BAPE, 2015).

The utility for Canada's uranium began to transition in the early 1960's due to the emergence of the nuclear energy sector to principally civilian uses. The petroleum crisis of the 1970's led many countries to turn towards nuclear power to satisfy their energy demands allowing the demand for uranium to rapidly increase (BAPE, 2015). Demand for uranium would continue to increase until the end of 1980's. However, this was mostly based on erroneous forecast models of growth in the nuclear energy market leading to an oversupply of uranium (Combs, 2004; Perreault, 2005). Along with heightened sensibilities surrounding nuclear power following the accidents in Three Mile Island, United States and Chernobyl, Soviet Union, the natural correction of the market led to a drastic depression in the uranium market, including in Canada (Perreault, 2005).

Since the mid-1990's, uranium mining activity in Canada has been exclusively concentrated in northern Saskatchewan (NRCan, 2014). Currently there are three active mines in the Athabasca basin of northern Saskatchewan (Perreault, 2005; BAPE, 2015). They are the Cigar Lake mine,

the McArthur River mine and the Rabbit Lake mine. Saskatchewan is the world's second largest producer of Saskatchewan producing over 9000 tonnes of ore annually (NRCan, 2014; Vestergaard, 2015). The industry contributes annually CAD6\$ billion to the Canadian economy and accounts for 60 000 jobs (NRCan, 2018).

In Quebec, the first period of scientific research surrounding the presence of radioactivity in the environment occurred in the 1950's and 1960's through work done by the Geological Survey of Canada (BAPE, 2015). This research focused exclusively on the southern portion of the province. However, these radiometric surveys confirmed the occurrence of uranium within the province.

The second wave of uranium exploration began in the mid 1970's and ended in the early 1980's (Perreault, 2005; Lacoste and Roy, 2009; BAPE, 2015). During this phase, the Société de développement de la Baie-James headed geochemical surveys and the Ministry of Energy and Natural Resources undertook geologic mapping (BAPE, 2015). These exploration campaigns led to the discovery of many deposits in the province with uranium occurrences. These formations included the Sakami formation in the James Bay region, the Grenville geologic province in the Côte-Nord region and the Otish basin in the Nord-du-Québec region (Perreault, 2005; Lacoste and Roy, 2009).

Uranium exploration by industry in Quebec nearly ceased after the 1980's until the early 2000's coinciding with a depression in the worldwide uranium market (BAPE, 2015). According to the provincial Ministry of Energy and Natural Resources, most of deposits discovered in the province during the first and second waves of exploration were not commercially viable (Perreault, 2005; BAPE, 2015).

In more recent years, the sharp increase in the price of uranium in 2007 lead to a surge in uranium exploration in Quebec, as in many other jurisdictions (Bratt, 2014; BAPE, 2015). During this new wave of exploration much of the activity centered around the same regions as during the 1970's and 1980's, as well as in the Nunavik region (Lacoste and Roy, 2009). The uranium exploration rush led to a substantial increase in the exploration investments made by industry. In the early 2000's, investment in uranium exploration in Quebec was limited to tens of thousands of dollars. By 2007, over CAD70\$ million was invested by industry in uranium exploration (Lacoste and Roy, 2009).

In 2008, Quebec was home to over 70 uranium exploration projects (BAPE, 2015). Despite the downturn in the uranium industry following the Fukushima nuclear plant disaster in 2011, the province remained home to nearly 30 uranium exploration projects in 2012 (BAPE, 2015), including Strateco's Matoush project in northern Quebec. Investment in uranium exploration in the province was believed to increase the province's economic growth and reputation as a favourable jurisdiction for mining. Many stakeholders pointed to economic benefits such as the increase of royalty rates and taxes collected by the government as reasons to support the development of uranium in the province (BAPE, 2015).

1.1.5 Synthesis

The academic literature pertaining to uranium development is broad in scope and includes many different inter-related issues. The literature on uranium development often focuses on its association to nuclear power and the perceived risks surrounding the industry. There has been a lot of work done recently surrounding the effects that the Fukushima disaster may have had on public perceptions surrounding nuclear power and how governments have reacted in accordance to public perceptions. Some work has been done on the future role of the uranium industry and how the industry attempts to frame public discourse considering opposition to the industry, such as in the Graetz (2014) paper. The interaction between the industry and its stakeholders has been discussed by Falck et al. (2015a), Falck et al. (2015b), Graetz (2015) amongst others. However, there is a gap in the literature specifically pertaining to how controversies surrounding mining development evolve and what strategies the industry may employ to mitigate opposition to its projects. In addition, the role that government plays in these situations has not been sufficiently addressed in the literature.

1.2 Research objectives

This study concerns itself with the development of the debate surrounding uranium mining in Quebec from the mid 2000's onwards. It aims to reconstruct the events leading to controversy between a company and the provincial government. Particularly, it seeks to identify the communication strategies used by the industry during the controversy by examining the most

advanced uranium project in the province. This study will allow to answer the following research question:

What communication strategies were employed by Strateco to defend its interests during the development of the Matoush project and how did these strategies evolve over the course of the controversy?

1.3 Theoretical framework

Originally, neutralization techniques were studied in the context of explaining how juvenile delinquents rationalized behaviour contradicting their moral obligations towards society. Through this approach, Sykes and Matza could reason on how delinquents were able to justify their illegitimate actions through strategies such as denial of responsibility, denial of harm or injury, denial of the victim, appeal to higher loyalties and condemnation of the condemners (Sykes and Matza, 1957). Subsequent authors have added to the original list of neutralization techniques identified by Sykes and Matza such as Klockars (1974), Thompson (1980), Minor (1981) and Bandura (1990). These authors identified new techniques such as the dispersal of blame, the transferring of blame, defence of necessity, the dehumanisation of the victim and the misrepresentation of the evidence.

Neutralization theory is a product of a rich and somewhat mixed lineage. It is usually understood as single component of a larger theory (Maruna and Copes, 2005). Individually, the theory is not sufficient in explaining differences across crime cultures. The theory's value is mainly in enhancing or developing existing theoretical frameworks for understanding offending. Neutralization theory complements Festinger's (1957) theory of cognitive dissonance and Bandura's (1990) theory of moral disengagement (Divard, 2013).

The initial premise of the theory is that delinquency is not guided by moral imperatives, values or attitudes incongruent with societal norms, but rather by a series of justifications or rationalizations (Divard, 2013). These series of justifications and rationalizations are the techniques of neutralization, which can shield individuals from feelings of guilt and from accusations. Sykes and Matza reasoned that most delinquents are attached to a dominant social order. They argued that

these individuals developed schemas of thought which would facilitate the integration of the normative system (Sykes and Matza, 1957; Divard, 2013).

Sykes and Matza (1957) arrived at this conclusion through four key observations. First, they reasoned that if delinquent subcultures did exist, delinquents must view their actions as morally correct. Second, they deduced that delinquents should value the opinions and lifestyles of individuals displaying similar behaviour and dismiss the opinions of those who do not. Third, they assumed that if offenders unconditionally accept crime, they would treat all victims equally. Lastly, they believed that offenders should be unaffected by the demands of conformity. They argued that in fact delinquents do feel shame and guilt for participating in illegal behaviour, show admiration for law-abiding citizens, make clear distinctions on who can and cannot be victimized and participate in the same social functions as their law-abiding counterparts. Therefore, Sykes and Matza concluded that delinquents do distinguish between right and wrong and are subject to influences from both delinquent and non-delinquent subcultures.

One of the greatest testament to the influence the techniques of neutralization have had is that they are no longer confined solely to the study of delinquency in criminology (Maruna and Copes, 2005). Despite originating in the field of juvenile delinquency, the theory has been used to understand participation in violent crimes such as murder and genocide (Levi, 1981; Alvarez, 1997; Bohner et al., 1998) and less serious deviant behaviors such as gambling (King, 1990; Chapple and Nofziger, 2000). Neutralization techniques have been studied within a wide variety of social science contexts. These contexts range from criminal behaviour to consumer behaviour to social activism (e.g. Chatzidakis et al., 2004; Chatzidakis et al., 2007; Harris and Daunt, 2011; Johnston and Kilty, 2016).

Perhaps the theory's most receptive audience has been in studies of organizational and white-collar crimes (Maruna and Copes, 2005). The theory has evolved from solely being applied within the context of individual actors to the being used in describing corporate behaviours as well (Fooks et al., 2013; Talbot and Boiral, 2015; Meesters and Behagel, 2017). According to Talbot and Boiral (2015) neutralization techniques represent a better way to analyze the arguments made by companies to enhance or protect their corporate image, especially if the company's social legitimacy is threatened or challenged.

The corporate justification behaviours of companies through the techniques of neutralization has increasingly been the focus of study (Lim, 2002; Bolino et al., 2008; Fooks et al., 2013), including within the realm of natural resource extraction (Talbot and Boiral, 2015; Boiral, 2016; Meesters and Behagel, 2017). Neutralization techniques are an often-used defensive impression management tactic (Talbot and Boiral, 2015; Boiral, 2016) utilized by companies often to justify negative elements and deny any corporate responsibility (Chadzikadis et al., 2004). They are rationalizations which are invoked by an actor to legitimize their behavior or actions.

Impression management refers to the strategies employed to create desired social images or identities (Talbot and Boiral, 2015). These strategies are undertaken either to reconcile the discrepancy between behaviour and the positive image attempted to be projected or to protect the actor from blame (Robinson and Kraatz, 1998; Lim, 2002). Often, the same neutralization techniques that are employed by individual actors will be used by companies (Whyte, 2016). Some of the other corporate techniques of neutralization identified in the literature are self-proclaimed excellence, the promotion of a systemic view, the claim of economic or technological blackmail, the claim of net positive and the dilution of responsibilities.

One of the strengths of the theory of neutralization is that it has universal applicability and can thus be used in any case where there are inconsistencies between one's actions and beliefs (Hazani, 1991). This theoretical flexibility has allowed the theory to remain relevant all these years later and in many fields above its original scope. Given that neutralization theory was first proposed over 60 years ago, it appears that it has withstood the test of time. However, the realm of social sciences research has evolved immeasurably since neutralization theory was first formally introduced by Sykes and Matza in 1957. Despite its prominence in many fields, the theory remains undertheorized (Maruna and Copes, 2005). When researchers invoke the theory, generally they tend to preserve the theory in its original form, rather than refining it to more appropriately reflect newer research and development areas (Maruna and Copes, 2005).

The theoretical framework of this study is based on the theory of neutralization techniques, popularized by Sykes and Matza (1957). The research design employs an adapted version of the theory, within the context of corporate justification behaviors, to study how mining companies

employ these techniques as part of their communication strategies. The present study contributes to the literature in demonstrating how neutralization techniques are leveraged as part of the strategies of engagement of stakeholders by mining companies and how they are used by companies to justify and defend their interests. The study of the utilization of neutralization techniques by natural resource companies has not been sufficiently examined in the literature (Talbot and Boiral, 2015; Boiral, 2016; Meesters and Behagel, 2017). The study also contributes to the neutralization literature on corporate actors by illustrating the evolution of the techniques used by an actor over the course of time and change in context.

1.4 Methodology

This study aims to assess the communication strategies used during the debate surrounding uranium development in Quebec and how these strategies evolved over time through the qualitative content analysis of newspaper articles and official company documents. Through qualitative content analysis, the central themes of each data point can be broadly identified. This method is appropriate for the research objectives of this study.

Qualitative content analysis is defined as a systematic process of classification and codification of data (Zhang and Wildemuth, 2009). It allows to systematically describe the meaning of qualitative data (Schreier, 2014) by precisely identifying the themes present in the documents analyzed (Léray and Bourgeois, 2016). This is done by assigning successive parts of the material to the categories of a coding frame, with the purpose of gleaning knowledge, new insights, representation of facts and serves as a practical guide to action. This is achieved by attaining a condensed and broad description of a phenomenon through concepts or categories (Elo and Kyngäs, 2008).

Content analysis coding can be undertaken by two different approaches, inductive or deductive. Depending on the research objectives, one approach may be more appropriate than the other. The inductive approach moves from the specific to the general, while the deductive approach moves from the general to the specific (Elo and Kyngäs, 2008). Despite this, the two approaches are not mutually exclusive and can be combined (Zhang and Wildemuth, 2009). Thomas (2006) explains that the primary purpose of inductive analysis is that it allows research findings to emerge from

frequent, dominant or significant themes inherent from raw data, without the restraints imposed from more structured methodologies. This approach permits the creation of new categories and concepts. Conversely, deductive analysis is applied when the structure of analysis is operationalized based on previous knowledge and the purpose of the study is testing a theory (Elo and Kyngäs, 2008).

Hsieh and Shannon (2005) described three different methods to qualitative content analysis, whose pertinence varies depending on the objectives of the researcher. The methods are the conventional content analysis, the directed content analysis and the summative content analysis. The key difference between each of these methods centres on how the initial codes are developed. In the case of the conventional method, categories are derived from the data during the data analysis. With the directed method, the researcher uses an existing theory or coding scheme prior to analysing data. In the summative approach, the text is approached through single words, with an analysis of the patterns observed used to make interpretations. The conventional method allows the researcher to gain direct information from the study sample without imposing preconceived categories or theoretical perspectives.

This study employs the directed method of content analysis. This method is applied within the context of studies attempting to describe a phenomenon which has not been thoroughly studied or would benefit from further description (Hsieh and Shannon, 2005). The aim of using the directed method is to validate or conceptually extend a theoretical framework or theory (Hsieh and Shannon, 2005; Zhang and Wildemuth, 2009). Content analysis privileging a directed approach is guided by a more structured process than the conventional method (Hickey and Kipping, 1996). According to Hsieh and Shannon (2005), one of two strategies can be employed by the researcher, depending on the research question or objective. In the first strategy, the researcher would identify all relevant passages of text and assign predetermined codes to the passages. Any text which is unable to be categorized with the original coding scheme is given a new code. The other strategy is to begin coding immediately with predetermined codes. Any data which cannot be coded is identified and later analyzed to determine whether it represents a new category or simply a subcategory of an existing code. Despite its strength in that it allows theories to be further supported, the directed method has some drawbacks. By employing the directed method, the

research design is exposed to potentially strong bias. It can also lead to an overemphasis on theory thus neglecting contextual aspects of the phenomenon being studied (Hsieh and Shannon, 2005).

Irrespective of the approach privileged by the researcher, all approaches to qualitative content analysis generally follow the same process. Initially, the data must be prepared. This is done by defining the unit of analysis of the data. This refers to the basic unit of text to be classified during the content analysis (Elo and Kyngäs, 2008; Zhang and Wildemuth, 2009). The following step is the organizing phase where the data is coded. Categories and coding schemes are developed and tested. Once all the data is coded, the coding consistency must be assessed (Zhang and Wildemuth, 2009). The final phase of qualitative content analysis consists of drawing conclusions from the coded data and reporting the findings of the study (Elo and Kyngäs, 2008).

Qualitative content analysis has many strengths. It allows the use of retrospective data which can be employed to study phenomenon over the course of time and track their changes. Content analysis methods can be used to assess variations and to detect trends. Subsequent studies on the same subject can be useful for building databases (Kondracki et al., 2002). This research method is also efficient and inexpensive as the data is often publicly available. However, qualitative content analyses do also have limitations. There are limits to the inferences that can be drawn by using this research method. Causality cannot be established, and the results of such studies are not always generalizable (Kondracki et al., 2002; Mruck and Breuer, 2003).

In this study, more than 700 pages of documents spanning over a decade were analyzed. Over 500 passages were coded under two separate coding schemes leading 68 total categories separated amongst 14 themes. This study privileges the directed method as it allows the study to originate from a pre-established theory. The codes used in the study were derived from Sykes and Matza (1957) theory of neutralization techniques. The codes were determined before the data analysis, though some were adjusted during the analysis. By employing a directed strategy to content analysis, the theory of neutralization techniques can be supported and extended by conceptually extending a theoretical framework to help focus the research question of the study. This approach is pertinent for this study given the research objectives and theoretical framework of the study.

As previously stated, it is impossible to eliminate the subjectivity of the interpretation of the data during qualitative content analysis (Mruck and Breuer, 2003). The possibility of generalizing the

results from qualitative content analyses is limited due to the qualitative and exploratory nature of such studies. However, certain steps can be undertaken to mitigate this issue. As suggested by (Miles et al., 2013), categories can be defined to facilitate the interpretation of the information contained in the texts. These definitions allowed the standardization of the codification process. Another strategy is to employ double blind coding to ensure mutual understanding of categories by several researchers (Thomas, 2006). In this study, both strategies were utilized to help enhance the validity of the study.

2.1 Abstract

Controversy in Mining Development: A Study of the Defensive Strategies of a Mining Company

This paper explores the neutralization techniques used by a uranium mining company throughout a controversial project. Based on the content analysis of the company's annual reports, official company press releases, and newspaper articles, this study identifies six techniques used by the company to justify and defend its interests over the course of a 10-year span. Furthermore, this study identifies four phases that may characterize an exploration project controversy. The paper develops a better understanding of the justification strategies used by resource extraction companies when their efforts in stakeholder engagement have led to mixed results. The study contributes to the literature on neutralization techniques by demonstrating how these techniques are employed and evolve during controversies in resource extraction. This paper also highlights the role of the government in the development of the controversy around this natural resource project and how the dynamics between the company, stakeholders, and government changed over the course of this controversial project.

Keywords: Neutralization techniques, mining, uranium, project controversy, stakeholder engagement

2.2 Introduction

Investment in mining projects involves significant uncertainty. Project investment is usually high risk, irreversible, and challenged by major economic factors (Foo et al., 2018). The uranium mining industry is no different (Mudd, 2014; Ferguson and Lam, 2016). Successful stakeholder engagement remains one way to mitigate some of the risks faced by mining companies and has been proven to be a valuable tool in assuring broad support for their projects (Eerola, 2013; Ziessler

¹ This article has been submitted to Resources Policy and is currently in review

et al., 2013; Henisz et al., 2014). This has been especially true during the exploration phase of a mining project, where initially fostering good relationships with stakeholders is imperative to assuage their concerns and gain their support (Luning, 2012; Eerola, 2013, Falck et al., 2015a; Falck et al., 2015b; Thomas et al., in press).

Like many jurisdictions, the Canadian province of Quebec saw an increase in exploration activities surrounding uranium between 2007 and 2009, coinciding with a rapid increase in the global price of uranium and governmental initiatives to reduce dependence on fossil fuels (Bratt, 2014). At its pinnacle in 2008, there were over 70 uranium exploration projects in Quebec (BAPE, 2015, p.83). Though the Fukushima nuclear plant disaster in 2011 affected the uranium industry worldwide (Ming et al., 2016; Latré et al., 2017), the province remained home to nearly 30 uranium exploration projects in 2012 (BAPE, 2015, p.83). The most prominent of these exploration projects was Strateco's Matoush project in northern Quebec, and Strateco continued with its ambition to open the province's first uranium mine (Strateco, 2007; Strateco, 2008). Over the lifespan of the project, the company invested nearly CAD\$200 million (Strateco, 2015; Baril, 2016). Despite early optimism surrounding its viability, the project became mired in controversy due to the objections of certain stakeholders, ultimately leading to a decade-long saga.

The objective of this study is to assess the communication strategies used by Strateco to defend the company's interests against some stakeholders' opposition to the project and to assess how these strategies evolved over time by reconstructing the events of the controversy. This study applies the theory of neutralization techniques to analyze the communication strategies employed by resource extraction companies and the evolution of these strategies in response to mounting opposition and controversy. This theory elaborates the strategic methods that actors employ to justify or rationalize their actions (Sykes and Matza, 1957). The present study contributes to the literature in demonstrating how neutralization techniques are part of the stakeholder engagement strategies of companies in resource extraction industries and how companies use these techniques to justify and defend their interests. Natural resource companies' use of neutralization techniques has been of limited interest in the literature (Talbot and Boiral, 2015; Boiral, 2016; Meesters and Behagel, 2017). The study also contributes to the neutralization techniques literature on corporate actors by illustrating how companies modify the techniques used over time. To our knowledge, no study has systematically examined the evolution of neutralization techniques through a

longitudinal approach (Talbot and Boiral, 2018). Lastly, this study also fills a gap in the literature on the role of governments in controversies surrounding exploration projects. This study shows that the government's role—to manage and balance stakeholder expectations with the economic benefits of a project—evolves over time, as support for these projects becomes increasingly polarized.

Studying company-stakeholder relations in the context of the development of an exploration project is especially pertinent given that mineral exploration not only has crucial importance in the mining cycle, but is also the first time a company has contact with local stakeholders and represents the initiation of their relationships with them (Eerola, 2013). As with any exploration project, economic, technical, environmental, and health and safety uncertainties surround uranium exploration. Given that uranium mining is widely feared and misunderstood, it continues to be accompanied by significant ongoing and emerging conflicts (Falck et al., 2015a; Falck et al., 2015b). Through an example that is both an exploration project and a uranium project, this study examines a case where the interactions between industry and stakeholders are expected to be especially consequential. Many studies have focused on the engagement of stakeholders by mining companies (e.g. Kepore and Imbun, 2011; Eerola, 2013; Ziessler et al., 2013; Dobeles et al., 2014; Henisz et al., 2014; Ranangen and Zobel, 2014a; Falck et al., 2015a; Falck et al., 2015b; Mzembe, 2016; Moomen and Dewan, 2017). However, there is a limited focus in the literature on the strategies employed by mining companies when their efforts in stakeholder engagement have had limited success.

The rest of the article is organized as follows. First a review of the literature on stakeholder engagement in mining and the role of neutralization techniques in a company's communication strategy is presented. Next, the methodology and main results are presented. Finally, the last section is devoted to the discussion of the results and their policy implications.

2.3 Strategies in stakeholder management

2.3.1 Stakeholder engagement

As stakeholders have become increasingly wary of mining development, they have demanded that the industry align itself more closely with the pillars of sustainability, thus emphasizing increased community participation in decision-making (Prno and Slocombe, 2012, p.346). This shift has

yielded a broadened range of governing actors in mining projects, resulting in industry and civil society sharing governing responsibilities with governments (Ballard and Banks, 2003; Lemos and Agrawal, 2006; McAllister and Fitzpatrick, 2010; Prno and Slocombe, 2012; Prno, 2013). Stakeholder engagement has thus become more scrutinized recently (Eerola, 2013; Ziessler et al., 2013; Hennisz et al., 2014; Eerola, 2017).

Ranangen (2015) describes stakeholder engagement as a managerial framework for dealing with Corporate Social Responsibility (CSR) by interacting with stakeholders to create value for a company. CSR is of great significance in the mining industry (Jenkins and Yakovleva, 2006; Ranangen and Zobel, 2014a), and it is widely accepted that the industry is at the forefront of the CSR movement (Ranangen and Zobel, 2014b). A common view in the CSR literature is that companies should move from a traditional shareholder focus towards emphasizing stakeholder engagement (Ranangen and Zobel, 2014a). The literature on stakeholder engagement in mining and how it relates to CSR is rich (e.g. Kepore and Imbun, 2011; Luning, 2012; Dobeles et al., 2014; Mzembe and Downs, 2014; Mzembe and Meaton, 2014; Viveros, 2016; Ranangen and Lindman, 2018).

Given the new realities of the relationship between the mining industry and its stakeholders, the voices of citizens from mining communities have become far more influential in the political and decision-making processes in the development of mining projects in recent years (Prno and Slocombe, 2012). Stakeholder engagement is considered to be an essential part of natural resource development (Billgren and Holmen, 2008; Colvin et al., 2016; Mzembe, 2016). Colvin et al. (2016, p. 266) state that engaging stakeholders in decision-making yields benefits such as incorporating a range of perspectives, fostering social acceptance for a project, and promoting sustainable development in natural resource development.

The literature has discussed the relationship between stakeholders and industry and how stakeholders can influence the mining industry's engagement with them (Kemp, 2010; Mzembe, 2016; Moomen and Dewan, 2017; Viveros, 2017; Mercer-Mapstone et al., 2018). The literature has also broached the importance of stakeholder engagement for mining companies determined to receive a social license to operate and the importance of specifically engaging with local First Nations communities (e.g. Prno and Slocombe, 2012; Owen and Kemp, 2013; van der Plank et al., 2016; Wang et al., 2016; Meesters and Behagel, 2017).

Yet, despite the literature's strong focus on the role and importance of stakeholders in the development of mining projects (e.g. Kepore and Imbun, 2011; Prno and Slocombe, 2012; Dobeles et al., 2014) and the fact that stakeholder engagement is now commonplace for mining companies, there remains a significant gap in the literature: how the industry perceives their relationship with their stakeholders and, in particular, how companies react when their efforts have proven fruitless have not yet been sufficiently studied. The literature has not assessed what course of action mining companies take when stakeholder engagement is unsuccessful.

2.3.2 Neutralization techniques

The theory of neutralization techniques, popularized by Sykes and Matza (1957), describes the strategic method by which a party attempts to legitimize their actions. Originally, neutralization techniques were studied in the context of how juvenile delinquents rationalized behavior that contradicts their moral obligations to society. Through this approach, Sykes and Matza (1957) could reason how delinquents were able to justify unlawful actions through strategies such as denial of responsibility, denial of harm or injury, denial of the victim, appeal to higher loyalties, and condemnation of the condemners (Sykes and Matza, 1957).

Neutralization techniques represent an often-used defensive impression management tactic (Talbot and Boiral, 2015; Boiral, 2016). They are used by companies to justify negative elements and deny corporate responsibility (Chatzidakis et al., 2004). These techniques offer a lens through which to analyze companies' arguments that enhance or protect their corporate image, especially when their social legitimacy is challenged (Talbot and Boiral, 2015).

Neutralization techniques have been studied in a wide variety of social science contexts. These contexts range from criminal behavior to consumer behavior or social activism (Chatzidakis et al., 2004; Maruna and Copes, 2005; Chatzidakis et al., 2007; Harris and Daunt, 2011; Johnston and Kilty, 2016). While the scope of analysis of neutralization techniques has generally been restricted to the individual, the theory has more recently been applied in the context of corporate behaviors (Fooks et al., 2013; Talbot and Boiral, 2015; Meesters and Behagel, 2016). The notion of neutralization techniques at the organizational level can be understood as the propagation of information aimed at rationalizing and legitimizing unethical behaviors, negative impacts, or issues that can undermine the image of an organization (Boiral, 2016).

However, extensive study on corporate entities' use of neutralization techniques does not yet exist (Talbot and Boiral, 2015). In particular, corporate justification behaviors in the realm of natural resources policy have not been extensively studied in the literature (e.g. Talbot and Boiral, 2015; Boiral, 2016; Meesters and Behagel, 2017).

Though the existing literature has made it possible to highlight certain strategies companies use to legitimize their positions and defend their interests, it is still insufficient. Few studies have focused on extractive industries, particularly how companies in these industries utilize these techniques within their broader strategies of stakeholder engagement. Furthermore, the literature on the evolution of neutralization techniques over time is scarce. There has been little to no longitudinal studies analyzing how corporate defense strategies change over time.

Extending Sykes and Matza's original concept to illustrate the key role that neutralization techniques play in the communication strategies of mining companies not only allows us to acquire a better understanding of how mining companies defend their position and interests in the development of projects, it also allows us to understand how these company's strategies evolve during a controversy.

2.4 Methodology

2.4.1 Research strategy

This study consists of a qualitative content analysis. Qualitative content analysis is a method for systematically describing the meaning of qualitative data (Schreier, 2014) by assigning successive parts of the material to the categories of a coding frame. The purpose of using content analysis is to glean knowledge and new insights and to develop a representation of the facts and practical guide to action, all of this with the aim of attaining a condensed and broad description of a phenomenon through concepts or categories (Elo and Kyngas, 2008). The main strength of a directed approach to content analysis is that existing theories can be supported and extended (Hsieh and Shannon, 2005). As such, it allows researchers to conceptually extend a theoretical framework, such as neutralization techniques, to help focus the research question of the study (Hsieh and Shannon, 2005).

2.4.2 Data collection

The data for this study was collected from Strateco's press releases and annual reports, as well as articles on the Matoush project published in major newspapers in Quebec and Canada.

Strateco's press releases and annual reports are publicly accessible through the company's website. The newspaper articles analyzed were collected through the Eureka and Factiva newspaper article search engines. In all cases, newspaper articles were found by searching the terms 'Strateco', 'Uranium' and 'Quebec' through the search engines.

Overall, 178 press releases, 10 annual reports, and 75 newspaper articles were retained for the study. Nearly 700 pages of data were collected and analyzed. The inclusion criteria for this study were that the data was relevant to the Matoush project controversy and that it covered the period between 2007 and 2017. This period corresponds to the beginning of the company's operation of a camp at the Matoush project site in 2007 to the 2017 provincial court ruling on whether the government had acted improperly on the Matoush project. Data relevant to the Matoush project was considered to be articles, press releases, and sections of annual reports that directly pertained to the development of the project. This includes statements made by the company regarding the project, stakeholder statements regarding the project, and media information on the advancement of the project. The articles come from local newspapers in the region of the Matoush project (1), major provincial newspapers (6), and national newspapers (2).

2.4.3 Data analysis

Through qualitative content analysis, the central themes of each data point can be broadly identified. Initially, the key meanings and content of the selected meaning units—whether these are words, sentences, or paragraphs from the press releases, annual reports, or articles—are summarized in compact form (Haapanen and Tapio, 2016). The selection of meaning units is based on the research objectives previously outlined. In this case, the units of meaning were passages of text where either the company attempted to justify its behavior or where a stakeholder, other than the company, acted in a way that influenced the Matoush project controversy. After the identification of the central themes of each of the briefs, coding can proceed.

Based on the notion of temporal bracketing, two separate coding schemes were developed. By employing Langley's (1999) temporal bracketing technique, the longitudinal dataset was separated into distinct periods. One of the schemes attempted to identify the distinct phases of the controversy. The other focused on identifying the neutralization strategies employed by the company over the course of the controversy.

A total of 342 passages were coded in the first coding scheme. The segments used came from 24 categories stemming from five themes (stakeholder positions, government positions, regulatory processes, inquiry commission, and other events). The themes were based on events related to the Matoush project and stakeholders' reactions to the Matoush project. By developing a scatterplot of the annual proportion that each of the codes represented, three distinct transition periods emerged.

The second coding scheme consisted of 213 passages coded into 44 categories under 9 themes (company's assertions of self-proclaimed excellence, company claiming to have been victimized, company blaming others, company marginalizing stakeholders' positions, talks of legal challenges, actions in defense of stakeholders, promotion of an optimistic view, company appealing to common sense, and company claiming to be subjected to economic blackmail). The themes of this second scheme were based on the literature on neutralization techniques. During the coding process, other themes—in addition to the original Sykes and Matza (1957) neutralization techniques—emerged, leading to the nine relevant themes. The categories were based on justifications made by company officials to rationalize their position.

To ensure the thoroughness of the analysis, two verification strategies were employed. First, as suggested by Miles et al. (2013), the categories were defined to facilitate the interpretation of information. These definitions enabled the standardization of the codification process. The second strategy aimed to confirm the coders' mutual understanding of the categories through double-blind coding² (Thomas, 2006). Several meetings between the coders were conducted to facilitate communication and agreement on the coding scheme. The double-blind coding revealed no major differences in coding between the coders.

² Coding done by Ismaël Karidio, M.Sc candidate at École nationale d'administration publique (ENAP) and by David Talbot, Ph.D and assistant professor at ENAP

Coding was done using QDA Miner software, version 5.0.17.

2.5 Results

Over the course of the 10 years analyzed, four phases of the project's development emerged. Each of these phases is characterized by important milestones and an evolution in the public discourse surrounding the Matoush project. The phases are the following:

- Pre-controversy
- Emergence of the controversy
- Politicization of the controversy
- Extension of the controversy

Phase 1 (2007-2009): Pre-controversy

One of the many junior exploration companies aiming to develop Quebec's first commercial uranium mine, Strateco began operating a camp on its newly acquired Matoush property in Northern Quebec in 2007. The company improved the infrastructure surrounding its camp and carried out several preliminary geological analyses during its exploration programs of 2007 and 2008. These yielded promising results for high-grade, commercially viable uranium (Strateco, 2007; Strateco, 2008).

In addition to its preliminary exploration work around the Matoush project, the company initiated preliminary consultation sessions with local and regional stakeholders including local governments, the residents of Chibougamau and Chapais, and First Nations near the project—particularly the Mistissini Cree (Strateco, 2008; Strateco, 2009). As part of its strategic action plan, the company prioritized engaging stakeholders with the primary goal of communicating the project's development and ensuring that the public was well informed about the realities of uranium mining (Strateco, 2008).

Strateco applied for its preliminary permits from the federal regulator, the Canadian Nuclear Safety Commission, to begin construction on the site at the end of 2008 (Strateco, 2008). Obtaining

these permits would allow the company to begin site preparation, excavate an access ramp, and dig exploration drifts to carry out definition drilling.

In 2009, the company completed and filed an environmental impact study on the Matoush project. The study's content was to be presented and discussed at public hearings held jointly by the appropriate provincial review committee and its federal counterpart (Fontaine, 2010). The company also received several provincial permits including the land use lease for the camp (Strateco, 2009).

Strateco also continued to engage Matoush project stakeholders by holding technical presentation sessions for Cree officials, the provincial Ministry of Natural Resources, and the local member of Quebec's National Assembly. The aim of these presentations was to publicize the Matoush project and assuage stakeholders' potential health, safety, and environmental concerns surrounding uranium mining (Strateco, 2009).

This phase is characterized by the beginning of exploration work on the Matoush project site and the initiation of stakeholder engagement. At this point, not much controversy surrounds the project, and the project has thus not yet generated much media attention. Incidentally, stakeholders have also not yet taken a position on the prospect of the Matoush project.

Phase 2 (2010-2012): Emergence of the controversy

Strateco continued to engage with Matoush project stakeholders, holding public hearings in Mistissini and Chibougamau to allow the public to voice their input on the project in concert with other provincial and federal agencies as part of the regulation process. Dozens of concerned community members participated in these public hearings and highlighted their concerns about the possible irreversible impacts of the project on the local environment as well as the waste management of a uranium mine (CNSC, 2012). Strateco undertook further initiatives aiming to facilitate and strengthen communication with key stakeholders, such as opening offices in Chibougamau and Mistissini and creating the position of Community Affairs Manager (Strateco, 2010; Fontaine 2011).

Despite the company's stakeholder engagement efforts in this phase, it is also at this time that opposition to the project first manifested itself. The Cree Nation of Mistissini announced its opposition to the project based on their belief that they had not been adequately informed about the issues surrounding uranium mining and that uranium mining would jeopardize their quality of life. "We want to put an end to the issue of uranium development right now, once and for all³," said Mistissini Chief Richard Shecapio in 2012 (as cited in Fontaine, 2012a, p.A8). The Chief added, "in light of the lack of social acceptability, the incompatibility with our culture, and the poor understanding of the health and environmental impacts of the uranium mine project, it would be reckless on behalf of our people to go ahead and support Strateco's advanced exploration project⁴" (as cited in Fontaine, 2012a, p.A8).

In response to the disapproval of Mistissini Cree, Strateco committed to establishing a communication program to disseminate transparent, reliable, and comprehensible information about the Matoush project to allow the community to access the necessary information. This program was created in December 2011 with the signature of a communication and information agreement between Strateco and the Cree Nation of Mistissini (Strateco, 2011).

Nevertheless, in the summer of 2012, the Grand Council of the Crees approved a resolution that imposed a permanent moratorium on all uranium mining-related activity on its territory; the decision was based on the belief that uranium activity would pose high risks to their communities and affect their traditional way of life (Fontaine, 2012b; Strateco, 2012; Dougherty, 2013).

However, not all stakeholders reacted negatively to the prospect of the Matoush project. Notably, the Cree tallymen of the James Bay territory and elected officials from the James Bay region affirmed their support for the project (Fontaine, 2010a; Fontaine, 2012c). Chibougamau Mayor Manon Cyr highlighted the economic benefits of the project and argued that the risks were well controlled by strict regulations (Fontaine, 2010a). She added that Strateco was very responsive in addressing questions from citizens in her community, "The company is very receptive. We congratulate them⁵" (as cited in Fontaine, 2010b, p.A3).

³ Statement translated from French and verified by a professional translator

⁴ Statement translated from French and verified by a professional translator

⁵ Statement translated from French and verified by a professional translator

As the authority responsible for uranium development in Canada, the Canadian Nuclear Safety Commission was responsible for holding public hearings on the technical aspects of Strateco's plans for its underground exploration program of the Matoush site; these public hearings gave the population another opportunity to voice their views on the project. In early 2012, the federal environment minister approved the proceeding of the Matoush project, and, in the fall of 2012, the company received its license from the Canadian Nuclear Safety Commission to begin its advanced underground exploration program for a maximum allowable period of five years. The only remaining approval required for Strateco to commence this phase of exploration was that of the Quebec Ministry of the Environment.

The Matoush project seemed to be viewed positively by the provincial government, as Premier Jean Charest's Liberal government included it in its ambitious CAD\$80 billion, 25-year *Plan Nord* ("North Plan") to develop the natural resource sector in the northern parts of Quebec (McKenna, 2011; Van Praet, 2014). However, the Charest government was defeated in the provincial election of the fall of 2012. The Parti Québécois government, led by Premier Pauline Marois, was less committal towards the prospect of uranium development in Quebec, though they did not dismiss it (Lévesque, 2012; The Canadian Press, 2012).

This phase is characterized by the introduction of the project into the media and the increased visibility of stakeholders, who begin to state their positions on the Matoush project. The Mistissini Cree nation reiterate their disapproval of any uranium project and call on the government to impose a moratorium on uranium development in the province. The concept of social acceptability as a pre-requisite for the project to move forward is also introduced. Despite this resistance, the company has received most of the required licenses to proceed, with the sole major exception of the provincial certificate of authorization.

Phase 3 (2013-2014): Politicization of the controversy

Following consultation with many of the Matoush project stakeholders, as well as the approval of the project from many of the responsible regulatory agencies, the imminence of the next phase of exploration at the Matoush site led to the full-on politicization of this controversy. The Matoush project became the last remaining uranium exploration project in Quebec, and the recently formed

Marois government was faced with pressure from many First Nations, environmental groups, and industry associations to take a stance on uranium-related activity (Caron, 2013; Dougherty, 2013; Dougherty and Beaudin, 2013; Baril, 2016). As a result, the Matoush project became emblematic of the entire uranium industry in the province, and stakeholders defended their positions with that in mind. Strateco became the de facto representative for the entire industry in Quebec.

After intensifying pressure, in early 2013, the provincial environment minister announced that the government would be conducting further studies on the development of uranium in the province. The independent provincial environmental review board, the *Bureau d'audiences publiques sur l'environnement* (BAPE), would be formally mandated with an industry-wide review on the development of uranium in Quebec. These consultations would focus on the environmental and social impacts of uranium exploration and mining and would allow the government to make an enlightened decision on the Matoush project (Caron, 2013; Dubuc, 2014).

By the end of 2013, the environment minister informed Strateco that no certificate of authorization would be issued for any uranium project in Quebec until the BAPE tabled its report, effectively imposing an administrative moratorium on uranium exploration and mining in the province (Caron, 2013; The Canadian Press, 2013; Van Praet, 2014). Faced with these new uncertainties related to the BAPE inquiry, Strateco decided to close its Matoush project site in June 2014 (Strateco, 2014).

The BAPE commission held public hearings across the province and invited stakeholders from industry, government, and civil society to present briefs defending their position to the commission. The commission yielded over 250 briefs either expressing support or condemnation of the prospective development of uranium in the province (Corbeil, 2015; Van Der Linde, 2016). Strateco did not present a brief to the inquiry commission (Côté and Champagne, 2015; Strateco, 2015).

The Parti Québécois government was defeated in the elections of the spring of 2014 and was succeeded by another Liberal government, this time led by Premier Phillippe Couillard, whose government appeared to acknowledge the political reality and remained indifferent towards the controversial project (Larocque, 2014).

This phase is characterized principally by the provincial government providing the BAPE with a mandate to conduct an industry-wide review on the development of uranium in Quebec and the reaction to this decision. This phase also elicits most of the media attention on the Matoush project.

Phase 4 (2015-2017): Extension of the controversy

At this stage of the controversy, the Matoush project site had already been closed since June 2014. For this reason, the company's focus shifted from the development of its project to recouping its losses by filing a lawsuit against the Government of Quebec.

In December 2014, Strateco filed a motion to institute proceedings in the Superior Court of Quebec in which it claimed CAD\$190 million from the provincial government for the wrongful actions of the government and the company's investment losses (Van Praet, 2014; Strateco 2015).

In May 2015, the BAPE released its final report for its commission of inquiry on uranium development in Quebec. The report suggested that there was insufficient social acceptability for uranium mining to proceed in the province at the present time and that it would be premature to move forward with the development of uranium in Quebec (BAPE, 2015). Given this conclusion, the government decided not to lift the administrative moratorium, effectively canceling the Matoush project as a result (Shields, 2017).

The project's demise led many mining industry stakeholders to question the province's attractiveness and competitiveness for mining investment; they believed that the result of the Matoush controversy showcased uncertainty in the province's regulatory regime and a serious lack of scientific rigor in the decision-making process (Marotte, 2015). The provincial government was critiqued in a scathing letter from the chief executive officer of the Canadian Nuclear Safety Commission: "It is very troubling to have the BAPE present your government with conclusions and recommendations that lack scientific basis and rigour" (Binder, 2015). Conversely, the Mistissini Cree Nation and environmentalists considered the abandonment of the Matoush project to be a victory for stakeholders' rights and the principle of social acceptability as a pre-requisite to any mining development (Marotte, 2015; Van Der Linde, 2016).

Following the final BAPE report, the discourse in this phase was focused on the impending court ruling. Leading up to the ruling, the controversy generated far less media interest and public

discourse than during the politicization phase. Ultimately, Strateco's lawsuit was dismissed by the ruling superior court judge in June 2017. The company is currently appealing the ruling (Mathieu, 2017; Strateco, 2017).

This phase is characterized by the BAPE's report and responses to it. In their report, the BAPE suggests that it would be premature to authorize the development of the uranium mining industry in the province, citing insufficient social acceptability. Many stakeholders, including the company, state their displeasure with the BAPE's conclusions, particularly that a perceived lack of social acceptability is a valid reason to impede the development of uranium mining in the province.

Neutralization techniques employed during the controversy

In the four phases of the controversy, six non-mutually exclusive neutralization techniques emerged in the company's strategy to defend its position and interests:

- Appealing to higher loyalties
- Condemning the government
- Denouncing unfair treatment and deceptive appearances
- Economic blackmail
- Leveraging higher power
- Minimizing stakeholders

Appealing to higher loyalties

With this technique, the company justifies its actions and position by claiming that it is acting principally in the interests of other stakeholders and the greater good. This is achieved mostly by reiterating its full-fledged support and defense of its shareholders. Secondly, the company attempts to demonstrate that it has broad support from other stakeholders and is therefore acting in the best interest of the community.

Appealing to higher loyalties is a technique that was used often by the company during the emergence of the controversy, where it was the most commonly identified neutralization technique. It also emerged as an important technique during the extension phase of the controversy.

Since the debate during the emergence of the controversy was mostly focused on stakeholders' positions on the Matoush project, the company employed this neutralization technique to claim that it had broad support for its project. In the company's public discourse, the focus would often be placed on the Mistissani Cree Nation's opposition to the project. The company attempted to demonstrate that despite this opposition, the project benefited from broad support across the region. In addition, the company justified its position by implying the provincial government was not acting with the best interest of stakeholders at heart. The company president and chief executive officer stated that "the government would be well advised to make a decision without waiting for a court ruling, which would be in the public interest and would send a strong message to the entire mining industry and investors" (as cited in Strateco, 2013b, p.1).

Later in the controversy, the definition of the subject of the company's "higher loyalty" shifted, as the company's focus changed following the closure of the project site. Whereas the company had previously been attempting to obtain a certificate of authorization from the provincial ministry of the environment, it was now attempting to recover its losses. As a result, in this last stage of the controversy, Strateco emphasized its commitment to its shareholders, while earlier in the controversy, its primary focus was on the project's community stakeholders. The company stated (as cited in Strateco, 2015, p.4), "the Company will continue to vigorously defend the interests of its shareholders, who have invested more than \$144 million in the Matoush uranium project." This represented a difference from the way the company employed this technique earlier during the controversy, when its primary focus was the project's community stakeholders such as the Mistissini Cree, the Tallymen, trapline families, and other local citizens and governments.

Condemning the government

This defensive neutralization technique was often used by the company. In this case, the company places the blame for the controversy squarely on the government and, more specifically, the environment ministers responsible for granting further authorization to proceed with the project.

The company criticizes the government for a lack of clarity on its approval process and its delayed decision and censures the minister for his or her actions.

Condemning the government is a technique that became increasingly prominent as the controversy progressed. The technique went from being negligible during the emergence of the controversy to prominent during the politicization phase; by the extension phase, it was one of the most utilized neutralization techniques. This is to be expected given that the company and the provincial government initially appeared to have a good relationship. The Charest government was even considered a partner of the Matoush project.

Changes in government and the politicization of the controversy lead to succeeding governments being much more cautious towards the development of uranium in the province. Through its decisions and actions, the Marois government and the subsequent Couillard government were perceived to be less favorable to the project. Strateco considered the Couillard government's policies on the Matoush project to be a continuation of those of the Marois government (Larocque, 2014).

Thus, it was to be expected that during the politicization phase, Strateco would resort to strong condemnation of the government as one of its principal techniques in its strategy to defend the Matoush project from the increasingly unfavorable political climate. For example, the Marois government was accused of neglecting evidence-based policymaking in favor of politically motivated decision-making. Strateco's president stated, "in addition to overlooking the recommendations of his own review committee, the Minister has also completely ignored the Canadian Nuclear Safety Commission's expert opinion. These internationally recognized experts have all concluded, without exception, that our project is safe" (as cited in *The Canadian Press*, 2013, p. B9).

Another example of this technique comes from the company's public statements on the government agency BAPE's inquiry commission. Strateco's statements assert that the commission was flawed from the outset: "It is obvious to us that Mr. Francoeur [the president of the inquiry commission] has neither the neutrality nor the legitimacy needed to chair the commission's work. Mr. Francoeur's bias is clear from the repeated comments he made while working for the *Le Devoir* newspaper" (as cited in Strateco, 2014b, p.1).

This tendency persisted in the extension phase, when the relationship between the company and the provincial government had become so toxic that the company shifted its focus merely to the recovery of its losses by taking legal action against the government. The basis for the company's legal action was that the provincial government had encouraged investment in the Matoush project and then changed the regulatory regime surrounding it mid-way through the process. According to the company, the government was at fault for the project's demise; the lack of decisive action from the government subjected Strateco to loss of revenue. This position is evidenced in the following statement from Strateco: "The government encouraged us to invest in uranium. Under the Mining Act, the Ministry of the Environment recognized that the impact of an operation would be negligible. But, after granting us thirty licenses over the years, Quebec told us no, because we did not have social acceptability with some Crees"⁶ (as cited in Renaud, 2014, p. 40).

Denouncing unfair treatment and deceptive appearances

This technique is employed by the company in attempting to portray itself as the party subjected to unfair demands from other stakeholders. The company claims that many of the processes during the controversy were conceived merely to create impediments to the project's advancement. It claims that stakeholders were mobilized often under false pretenses and through misinformation.

The denunciation of unfair treatment and deceptive appearances is another technique that became increasingly prominent as the controversy developed. In fact, this technique emerged as the most prominent technique during the extension phase of the controversy. This is to be expected given that what began as a positive relationship between the company and stakeholders became increasingly pessimistic as the controversy grew.

The subtlety of this technique is contrasted with the company's more open condemnation of the government. Instead of taking an aggressive approach and placing blame on a specific party, the company took a more passive approach and attempted to demonstrate that it was being wrongfully victimized. By not attacking its opponents, the company comes off as a more sympathetic actor. In turn, the blame can still be shifted to the provincial government implicitly rather than explicitly.

⁶ Statement translated from French and verified by a professional translator

During the politicization phase this technique was mostly used to question the motivations and impartiality of the Environment Minister, who was responsible for authorizing the Matoush project. This technique appears to have been utilized preemptively as the company sensed that the political climate surrounding their project was shifting. The company stated that “the way Strateco was treated throughout the licensing process shows that the Minister no longer has the impartiality required to assess the Strateco’s application for authorization on the basis of its merits” (Strateco, 2013a, p.9). As the company’s focus shifted regarding the Matoush project, its strategy also shifted. In employing this technique, the company could frame its justification as to why the company held the government responsible for the Matoush project failure, and the technique could be used complementarily with other neutralization techniques, such as condemning the government and the leveraging of higher power. The company illustrates this in the following statement from a press release: “We are of the opinion that the government’s position is contrary to the provisions of the Environment Quality Act and that it is irreconcilable with the principles of good faith that must guide it. The government is taking part in an illegal decision” (Strateco, 2013c, p.2).

By previously having illustrated that the company was faced with an unfair environment, the company could continue the same narrative effectively during the continuation of the controversy. The company’s response to the May 2015 BAPE report heavily criticized the results as based on a biased process, the results of which the company claimed were predetermined. In response to the record number of briefs presented during the BAPE inquiry commission, Strateco president claimed, “I think that the people from Québec meilleure mine had the briefs all prepared. [...] We watched the hearings on video and saw empty rooms⁷” (as cited in Côté, 2014, p. A13).

Through this neutralization technique, Strateco attempted to delegitimize the process surrounding the BAPE report. This was of fundamental importance given the government based its ultimate decision on the future of uranium in the province on the BAPE report. To defend its position during the extension of the controversy, the company resorted to striking against the most prominent element of the debate during this phase.

⁷ Statement translated from French and verified by a professional translator

Economic Blackmail

The objective of this technique is to frame the company as vulnerable and threatened by the government's actions. The company accomplishes this by claiming that they have been subjected to damages based on changes in the regulatory framework or fluctuations in the political desire for the project to come to fruition. The company also questions the favorability of the business environment in the province.

Claiming economic blackmail is a technique that was seldom used in the controversy. However, the company did make some allusions to being financially blackmailed during the politicization phase. Much of this technique stems from deploring the political will in the province to see the Matoush project, or any project for that matter, proceed. Strateco contended that "the Company was placed in a situation where it was no longer realistically able to interest investors in the Matoush project, was obliged to close the Matoush camp and cause permanent job losses, and lost any real opportunity to benefit from its mineral claims and its investment in the Matoush project" (Strateco, 2014b, p.1).

The economic impact of the controversy was also presented as a justification for claiming economic blackmail as a reason for the demise of the project. Strateco, being the de facto torchbearer of the uranium industry in Quebec, became a rallying point for the entire mining industry. The company claimed that the province became less attractive for mining investment as a result of the Matoush controversy. The company president emphasized this point in stating that "investors are telling us, you're too risky because you're in Quebec. They're saying, we don't know if you can get your permitting and we don't know how long it will take" (as cited in Van Praet, 2013, p.FP1).

Leveraging higher power

This is amongst the company's most aggressive and most frequently used neutralization techniques. It consists of employing legal recourse, or threatening to employ legal recourse, in dealing with the government. Here, the company ultimately seeks to recuperate what it claims are financial losses due to the government's actions, while continuing to defend itself and its shareholders' interests.

The leveraging of higher power was the most privileged technique during the politicization phase. It came to define the phase and best illustrates the evolution of the dynamics surrounding the Matoush controversy. Employing this technique can be considered the point of no return, when the controversy is no longer simply a question of the viability of a specific mining project.

It first emerged as the company filed a motion for mandamus to get the Quebec Superior Court to force a decision from the provincial environment minister. The company's 2013 annual report states that "in addition to seeking the invalidation of the decision, the Company is asking the Superior Court to force the Minister to issue the certificate of authorization needed for the advanced exploration phase" (Strateco, 2013a, p.9). Despite not receiving the sought-after decision, the company continued employing this technique as the politicization phased continued.

In leveraging a higher power, the company signaled a fundamental change in strategy and objective to its shareholders, the provincial government, and the other project stakeholders. In employing this technique, the hostility between the company and the provincial government reached its pinnacle. Strateco was no longer focused on the development of the Matoush site, which it had decided to shut down. The company was now solely focused on acting against a government it believed had betrayed them. Media reports would state, "Strateco is suing the provincial government for \$190-million in investment losses as a result of Quebec's blocking its underground Matoush uranium project in the Otish Mountains" (Marotte, 2015b).

Minimization of stakeholders

Among the neutralization techniques most favored by the company, the minimization of stakeholders represents a hostile and combative approach towards defending one's interests. Often the company would be dismissive of the opposition's positions on the project. For example, the company later debated whether the concept of social acceptability should be a determining factor for the political viability of the project.

Strateco minimized stakeholders mainly in the earlier phases of the controversy (emergence and politicization phases). This technique was often used to dismiss the principle of social acceptability as a fundamental criterion in evaluating the project.

Their contention was that not only is social acceptability a poorly defined concept, the matter of who can grant social acceptability is also unclear. The company asserted that many stakeholders supported the project and that the provincial government was effectively providing the Mistissini Cree Nation with a veto on the Matoush project:

Strateco has indicated to the Minister that a project's social acceptability cannot be limited to a single stakeholder, in this case the Cree. Furthermore, the Minister cannot abdicate his authority and give the Crees a veto on Category III lands, thereby creating a historical precedent in the development of Quebec's natural resources. (Strateco, 2013d, p.1)

Furthermore, Strateco believed that a lack of social acceptability was not a valid reason to refuse to grant the provincial environmental certificate of authorization, given that social acceptability is not legally defined as part of the evaluation process for mining projects in Quebec. The company points to "the lack of legislation, directives, policies, guidelines or any other document that might provide a clear understanding of what constitutes social acceptability in Quebec" (Strateco, 2013a, p.9).

Summary of the techniques used during the Matoush project controversy

Neutralization technique	Emergence of the controversy	Politicization of the controversy	Extension of the controversy
Appealing to higher loyalties	Present	Present	Present
Condemning the government	Negligible	Present	Present
Denouncing unfair treatment and deceptive appearances	Negligible	Present	Present
Economic blackmail	Absent	Negligible	Absent
Leveraging higher power	Absent	Present	Present
Minimizing stakeholders	Present	Present	Negligible

Negligible defined as a presence of less than 10% of statements analyzed in a given phase

2.6 Discussion

The objectives of this paper were to assess the communication strategies employed by mining companies to defend their interests during a controversy and how these strategies evolve over time. The assessment of Strateco's public statements regarding the development of the Matoush project led to the identification of six neutralization techniques used by the company over the course of the Matoush project controversy.

It was observed that the controversy could be divided into four separate phases, with each one provoking specific techniques of neutralization by the company. Initially, the Matoush project was relatively uncontroversial and did not generate much media attention. However, controversy emerged when certain stakeholders voiced their disapproval of the project. Once the project began to receive more media attention, the controversy became politicized. The fallout from the politicization of the controversy resulted in the extension of the controversy.

Overall, five of the neutralization techniques found in Strateco's statements were prominent in the company's strategy for handling the Matoush controversy. Techniques such as appealing to higher loyalties, condemning the government, denouncing unfair treatment, leveraging higher power, and the minimization of other stakeholders were privileged by the company in defending its position and interests. These techniques can be considered the major neutralization techniques of the Matoush controversy. References to economic blackmail were only sporadically used during the politicization of the controversy and were not identified in any other phases of the controversy.

Not every technique was prominent, or even present, in each phase. As the controversy was emerging, just two of these neutralization techniques were employed by Strateco (appealing to higher loyalties and the minimization of stakeholders). The politicization of the controversy led to an increase in the number of neutralization techniques used by the company; all five of the major techniques were employed by the company at this stage. Most of these techniques (four out of five) continued to be present during the extension phase (the minimization of stakeholders became less prevalent).

The style of the neutralization techniques also changed as the controversy evolved. Techniques that are more defensive became increasingly utilized in the politicization and extension phases. Furthermore, the neutralization techniques used by the company in the later phases of the

controversy were generally more aggressive. This suggests that the overall tone of the debate and the discourse became progressively negative and pessimistic over the years.

2.6.1 Contributions

This study makes three important contributions to the literature. First, the paper contributes to the literature on stakeholder engagement strategies by examining a company's use of neutralization techniques to legitimize its positions and defend its interests. These techniques have mainly been analyzed at the individual level (Bolino et al., 2008). Though they are being increasingly applied to corporate justification behaviors, the role of neutralization techniques in the realm of resource policy has not yet been sufficiently investigated (Meesters and Behagel, 2017). The neutralization techniques literature has largely ignored companies in resource extractive industries and has mostly focused on companies' environmental disclosure practices (Talbot and Boiral, 2015; Boiral, 2016). This study shows that these companies may also employ many of these same techniques in their public statements during project development. The present study contributes to a better understanding of the role that neutralization techniques play in the communication strategies of mining companies. The techniques that emerged from our content analysis of the Matoush project controversy mirror some of the original techniques described by Sykes and Matza (1957), such as appealing to higher loyalties and the condemnation of the condemner—who is analogous to the provincial government in this case. Other neutralization techniques described in this study share similarities with techniques previously identified in the literature (Fooks et al., 2013; Talbot and Boiral, 2015). However, the technique of leveraging a higher power does not appear to have been previously discussed. It is distinct from other neutralization techniques as it delegates the actor's own defense to another actor, and thereby implicates a new party in the legitimization (or delegitimization) of its actions.

Secondly, the longitudinal approach adopted in this study helps us to better understand the evolution of neutralization techniques by corporate actors involved in a controversy. This study shows that the preferred neutralization techniques of corporate actors tend to change over time and mirror the aspect of the company's social legitimacy that is being threatened or challenged. The results of this study compliment previous research by Dobeles et al. (2014) on the nature of mining companies' ongoing stakeholder engagement. These authors also emphasize the importance of longitudinal studies of mining companies' stakeholder engagement.

Thirdly, this paper contributes to the literature on the role that governments play in the development of natural resource projects and how this role can evolve over time. Traditionally, the role of the government in the development of natural resources is to balance the economic benefits of such projects with managing the expectations of all stakeholders concerned (Falck et al., 2015a). This study shows that this role can often evolve as support for these projects becomes increasingly divided. In the case of the Matoush controversy, the government's role changed as the controversy progressed. As the project became more politicized, the government responded by seeming to take an increasingly nuanced position towards the project; this led to uncertainty in the industry about the investment climate of the province. The company, in turn, also altered its strategy in response to changes in the government's position. This element of the study can support further investigation on how changes in government influence the development of natural resource projects and company decisions.

2.6.2 Implications and future research avenues

This study has practical implications for companies, stakeholders, and policymakers alike. First, understanding neutralization techniques can help stakeholders take a more critical view of the communication strategies of mining companies. Given the prominent use of these techniques, stakeholders should be able to identify and better understand the rhetoric used by mining companies in project development. The six techniques identified in this study are not necessarily unique to extractive industries and therefore could also be used to analyze the communication strategies of companies in other sectors in long-term projects.

The results of this study could also be of interest to policymakers, as this study highlights the evolution of the dynamics between mining companies and stakeholders during a controversy. In resource extraction, government often acts as the mediator between stakeholders and industry in the face of disputes (Falck et al., 2015a; Falck et al., 2015b). In the case of the Matoush project, the government went from being a neutral mediator to the central figure in the controversy from the company's point of view. Better understanding the characteristics of controversies in mining—such as the emergence, politicization, and extension phases—can allow policymakers and decision-makers to better mitigate the factors leading to these controversies, or at least better manage the controversy.

The Matoush project controversy can also serve as a lesson for prospective extractive industry developers and governments. This study highlights the need for effective partnership between all key stakeholders (industry, government, and community) and the need to continuously foster these partnerships over the course of a project. The government must clearly define not only its laws but also its expectations for the developer and ensure that both remain consistent to not jeopardize a project.

Conversely, it is in the developer's interest to continuously foster its relationships with all other stakeholders to avoid propagating a controversy surrounding its project. This case shows that if the relationship between the developer and other project stakeholders fails, it leads to a failed project and a monetary loss for the developer.

However, the possibility of generalizing the results of this study are somewhat limited by its qualitative and exploratory nature. With qualitative content analysis, it is impossible to eliminate subjectivity in the interpretation of the data (Mruck and Breuer, 2003). Future research on mining companies' use of neutralization techniques could potentially address this issue by not limiting itself to secondary data and conducting interviews with key informants from these companies to reduce subjectivity in the interpretation of the data. Triangulating data from several sources would be an appropriate strategy to reduce the subjectivity of the content analysis (Creswell and Miller, 2000; Humble, 2009).

A related research topic is the effectiveness of these neutralization techniques in the context of mining projects. Are stakeholders and policymakers receptive to the arguments presented by the industry? Do these techniques increase the likelihood of successfully completing a mining project? Future research could explore these questions by investigating how civil society and government stakeholders perceive the legitimacy of these arguments and whether industry managers feel them to be relevant.

General Conclusion

Following an upswing in the global uranium market, the province of Quebec saw a rapid increase in uranium exploration activity in the mid 2000's (BAPE, 2015). However, the 2011 nuclear disaster in Fukushima, Japan affected the nuclear energy industry and in turn the uranium market (Kessides, 2012; Latré et al., 2017; Ming et al., 2016). Heightened scrutiny and sensitivity by stakeholders regarding nuclear energy led governments to re-assess their policies towards energy and mining (Bratt, 2014). The province of Quebec was no different. Despite early optimism by the government towards the development of uranium mining in the province, no uranium mines have opened in the province, there is an administrative moratorium on uranium related activities and the developer of Quebec's most advanced uranium exploration project sued the provincial government for nearly CAD\$200 million. The uranium mining file in Quebec has been highly polarizing, politicized and controversial.

The objective of this study was to assess the strategies used by mining companies to defend their interests and legitimize their actions during on-going, long-term controversies surrounding projects. This was studied under the context of the controversial potential development of uranium in Quebec by evaluating the most advanced and prominent uranium mining project in the province, the Matoush project in northern Quebec.

This study identified that as part of its communication strategy, Strateco, employed many techniques of neutralization. Six main strategies were identified and discussed. They are the appealing to higher loyalties, the condemnation of the government, the denunciation of unfair treatment and deceptive appearances, claims of economic blackmail, the leveraging of higher power and the minimization of stakeholders. The study also identified the four phases of the controversy that these techniques were employed as part of the company's communication strategy. They are the pre-controversy phase, the emergence of the controversy phase, the politicization of the controversy phase and the propagation of the controversy phase.

This thesis contributes to the literature on the uranium industry by exploring the interaction between the industry and its stakeholders. It also serves as an overview on the issues facing the uranium industry. The uranium industry is widely feared, misunderstood and continues to be

accompanied by significant conflicts (Falck et al., 2015a; Falck et al., 2015b). This thesis sheds light on the industry and highlights the nature of the accompanying conflicts.

The policy implications of these conflicts cannot be neglected. Governments have a responsibility to balance the economic benefits of uranium mining with a responsibility to manage expectations among concerned stakeholders (Falck et al., 2015a). Government may also need to mediate between stakeholders with diverging interests. It is thus imperative that the government's role and position be clear and transparent to all stakeholders (Falck et al., 2015b). In this study, it became apparent that the government's role was perceived as ambiguous by the industry and became a major point of contention during the controversy. This can serve as a lesson in the future for industry, governments and other stakeholders.

It is projected that the demand for uranium will continue into the foreseeable future (BAPE, 2015; Kryzia and Gawlik, 2016). Given that Canada is a world-leader in uranium mining and in the nuclear power industry (Warwick and Hackley, 2014; Vestgaard, 2015; NRCan, 2018), it is likely that these policy issues will remain pertinent for Canadian policymakers and decisionmakers. Achieving a better understanding of how controversies in uranium mining arise and the dynamics of these controversies can favour better policies in mitigating or mediating the controversies.

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Annex A

Table 1: Summary of qualitative content analysis methods

Qualitative content analysis method	Starting point	Defining codes or keywords	Source of codes or keywords
<u>Conventional</u>	Observation	Codes are defined during data analysis	Codes are derived from data
<u>Directed</u>	Theory	Codes are defined before and after data analysis	Codes are derived from theory or relevant research findings
<u>Summative</u>	Keywords	Keywords are identified before and during data analysis	Keywords are derived from researcher's interest or review of literature

Annex B

Table 2: Summary of the techniques used during the Matoush project controversy

Neutralization technique	Emergence of the controversy	Politicization of the controversy	Extension of the controversy
Appealing to higher loyalties	Present	Present	Present
Condemning the government	Negligible	Present	Present
Denouncing unfair treatment and deceptive appearances	Negligible	Present	Present
Economic blackmail	Absent	Negligible	Absent
Leveraging higher power	Absent	Present	Present
Minimizing stakeholders	Present	Present	Negligible

Negligible defined as a presence of less than 10% of statements analyzed in a given phase

Annex C

Table 3: List of Newspapers used in the study of the Matoush project

Publication	Scope
La Sentinelle (Chibougamau)	Regional
La Presse (Montreal)	Provincial
Le Devoir (Montreal)	Provincial
Le Journal de Montréal	Provincial
Le Journal de Québec	Provincial
Le Soleil (Quebec City)	Provincial
The Montreal Gazette	Provincial
The Globe and Mail	National
The National Post	National

Annex D

Figure 1: Map of Quebec uranium mining activity in 2009

