

Cognitive Biases in Corporate Climate Action

How industry leaders are mitigating cognitive bias in the transition to a low-carbon economy

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Abstract

While previous research has suggested that climate change inaction by corporations has been the result of regulatory uncertainty, short-term economic pressures or compensation structures linked to environmental exploitation, this study analyzes the role of cognitive biases or heuristics in corporate decision making. Canada's most influential government, business and civil society leaders were interviewed on how cognitive biases contribute to climate change inertia within their industry circles. The resulting research highlights their strategies for surmounting the psychological barriers and continuing to push for change in the transition to a low-carbon economy.

Foreword

In 2017, I found myself in a lush, biological corridor in Costa Rica, working on environmental sustainability projects and studying the impact of globalization on indigenous peoples in the area. I met with the Boruca, the Bribri and the Cabecar communities, each of whom were facing varying levels of violence and oppression as they fought to preserve their communities and ecosystems. After eight years of work in the non-profit sector in Canada and in Latin America, I felt that my approach to change, working exclusively at a grassroots level, may not be sufficient in tackling the largest threat that these groups faced: the industrialization of their sacred land and loss of natural resources. I travelled to a plantation owned by one of the largest corporations in Latin America to have conversations with the management and measured it against the conversations I had with indigenous business owners. I realized that there is indeed a path to profit without the compromise of people and planet, but that there are clear psychological barriers to this shift, especially in the dominant corporate culture. As we approach a tipping point in the climate crisis, we need the strongest and most powerful leaders making strategic decisions with climate in mind. However, the rejection and minimization of the consequences of climate change that accompany the retreat to cognitive biases act as barriers to climate action at work. It is imperative that we understand the cognitive biases which contribute to climate change inertia, find strategies for overriding our natural tendencies and develop communication tools for bringing the most powerful players along in the transition to a low-carbon, socially-just economy.

Little did I know that the pursuit of this knowledge would involve impassioned debates with business, environmental studies and engineering students from around the world in ASI's Transitions Masterclasses; spiritual and artistic videography courses with some of Toronto's most talented

filmmakers; travels to Imperial College, London to help facilitate conversations on leadership strategies for sustainability; and the creation of a multimedia portfolio highlighting the insights of some of Canada's biggest players. I have developed sets of knowledge I did not even know existed to pursue skills I never thought I would acquire.

In order to better understand the cognitive biases associated with climate inaction and the communication or behavioural mitigation strategies, I studied individuals through the heuristic frameworks in start-ups, small businesses and multinational firms. I've studied and collaborated with a number of businesses looking to improve the sustainability of their operations to better understand their decision-making processes. In the pursuit of leadership strategies for sustainability, I studied leadership and change management theorists and read endless case studies on both successful and failed CSR projects. The questions involved in the successful mitigation of cognitive biases in the pursuit of climate action cannot be answered with absolute certainty. However, it is my sincere hope that other students of business and the environment may use this research to build upon their existing knowledge of corporate sustainability efforts, specifically as they navigate the complexities of corporate CSR decision-making. For my final MES research, I sat down with some of Canada's most influential government and business leaders to hear their stories and develop a deep understanding of the challenges and opportunities for mitigating cognitive biases across a wide range of specialized industries. I now feel humbled and excited to explore the results of this study in this paper and in the accompanying portfolio.

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Introduction

Climate change has been described by psychologists as a ‘perfect’¹ or ‘wicked’² problem because of its ambiguous identity which offers no clear timeline, no single solution and no definitive parameters through which the human mind can evaluate information and determine a clear path forward. Troubled by the overwhelming nature and scope of theorized outcomes, the brain overrides systems of rational and reflective decision making and instead reverts to cognitive biases for assistance.³ While previous research has suggested that climate change inaction by corporations has been the result of regulatory uncertainty, short-term economic pressures or compensation structures linked to environmental exploitation, the role of cognitive biases or heuristics may be equally impactful on decision making.⁴ The amorphous nature of climate change creates the ideal conditions for human denial, avoidance and the general diffusion of

¹ Marshall, George. *Don't Even Think about It: Why Our Brains Are Wired to Ignore Climate Change*. Bloomsbury, 2014.

²Incropera, Frank P. *Climate Change: A Wicked Problem: Complexity and Uncertainty at the Intersection of Science, Economics, Politics, and Human Behaviour*. Cambridge University Press. 2013.

Levin, Kelly, Benjamin Cashore, Steven Bernstein, Graeme Auld. *Overcoming the tragedy of super wicked problems: constraining our future selves to ameliorate global climate change*. *Policy Sciences*. 45(2), 125-152. 2012.

FitzGibbon, John and Kenneth O. Mensah. *Climate Change as a Wicked Problem: An Evaluation of the Institutional Context for Rural Water Management in Ghana*. SAGE, 2012. DOI: 10.1177/2158244012448487

³ Gilovich, Thomas, et al. *Heuristics and Biases: The Psychology of Intuitive Judgement*. Cambridge University Press, 2009.

⁴ Mazutis, D., & Eckardt, A. (2017). *Sleepwalking into Catastrophe: Cognitive Biases and Corporate Climate Change Inertia*. *California Management Review*, 59(3), 74-108.

responsibility.⁵ This retreat to cognitive shortcuts can result in the rejection or minimization of the consequences of climate change; especially within the traditional corporate context where normative perceptions of professionalism, hierarchy and responsibilities offer employees justification for pushing climate concerns aside. Fortunately, we can begin to understand how cognitive biases contribute to climate change inertia, and learn how to combat them, by exploring existing decision-making models and heuristic frameworks.

I interviewed some of Canada's most influential government, business and civil society leaders to uncover the elements of cognitive bias that are most challenging to overcome and highlight the factors of leadership that will help Canada transition to a low-carbon economy. Their strategies for overcoming barriers while continuing to push for change offer business, government and civil society leaders from around the world, possible tactics for mitigating cognitive biases within even the most high-impact industries.

⁵ Hoffman, Andrew J., and Max H. Bazerman. "Changing Practice on Sustainability: Understanding and Overcoming the Organizational and Psychological Barriers to Action." *Organizations and the Sustainability Mosaic: Crafting Long-Term Ecological and Societal Solutions*, Jan. 2007; Weber, 2006

Methodology

My initial MES research sought to explore a bottom-up approach to sustainability within corporate structures which hinges on the environmental passion of entry and mid-level employees to drive change forward. It was this interest which brought me to the Academy for Sustainable Innovation (ASI), working to develop a mentorship platform through which leading sustainability professionals could connect to passionate and ambitious young professionals through mentorship; supporting rising leaders, boosting collective creativity and driving disruptive innovation forward. It was, and remains my belief that a multi-level sustainability strategy which supports collaborative, democratic learning is the most effective way to create a relevant, engaging and purposeful vision within organizations and I intended to strengthen those multi-level bonds through the creation of such a platform.

As I worked on developing a mentorship platform for ASI, I field-tested the idea for a case study with a corporation with whom ASI had a connection. The direction of travel for their new sustainability strategy was towards innovative, sustainable solutions through the expansion of a product portfolio and public-facing messaging. I hoped to analyze the extent to which the sustainable business strategy had been filtered through the different levels of the organization but a preliminary field investigation indicated that the sustainability strategy was very C-suite⁶ driven and did not have a multi-level perspective. I sensed that this was because the company was in the early stages of their low-carbon transition, which had begun with a top-down mandate. Further

⁶ C-suite refers to the executive-level managers within a company. Common c-suite executives include chief executive officer (CEO), chief financial officer (CFO), chief operating officer (COO), and chief information officer (CIO)

research supported this trend of corporate leadership for sustainability as a driver of the low-carbon economic transition in Canada and, therefore, I pivoted my research to meet the needs of a larger investigation.

For a study at scale, I seized the opportunity to interview several connections through the Academy for Sustainable Innovation, allowing my work to complement my research and *vice versa*. The findings of the study were to be used both in my MES research and in support of ASI's mission: to provide a targeted 100,000 professionals with the skills, knowledge, and experience to manage Canada's shift to a more sustainable world over the next 15 years. The resulting video interview footage from my independent research has been used for both my final MES deliverables and for ASI's video series on insights from Canada's leaders in sustainability.

My role at ASI allowed for my access to high-level decision-makers with whom I would otherwise never have had the chance to converse. It expanded my convenient sample⁷ as these C-Suite leaders made themselves more readily available for questions; incentivized by the notion of showcasing the value and relevance of sustainability to those in their industry. Because of my continued work with ASI, this research will live beyond the walls and archives of York University and will go on to fuel the transition to a low-carbon economy; showcasing leadership across sectors as they work to create a more equitable and sustainable world.

⁷ This is not to say that garnering interest in the study was not challenging but my role at ASI did help to expand the population size of those more willing and able to participate in this study.

Research question

Primary question:

Which cognitive biases are most prevalent within a corporate context and how are they currently being challenged by corporate leaders to encourage and accelerate climate action?

Sub-questions:

- A. What are the commonalities in thought and action from leaders who are working to embed sustainability throughout all levels of their organization, thus creating a culture of sustainability?
- B. How does the capacity for critical, reflective thinking at a C-Suite level translate into a process of collective learning? Furthermore, how does it then build the organizational capacity required for company and industry-wide cultural shifts towards sustainability?

I set out to investigate these questions using a mixed-methods study between 2018-2019 that included the following components:

- 1) A literature review comprehensive of both human psychology (heuristics) and environmental management practices.
- 2) A review of the sustainability documents from the corporate leaders selected for this study.

- 3) Key informant interviews with leaders using **Merriam's pragmatic constructivist approach**.
- 4) Analytic memos and impressions aligned to the one-on-one interviews.

About the Literature Review

A review of two sets of literature was conducted. The first set relates to a broad, psychological perspective on the role of cognitive biases or heuristics in decision making. The second set revolves around management theory; specifically as it relates to organizational capacity for environmental change and related cultural shifts within a corporate context.

Conducting this review involved developing a concrete search strategy within clearly defined parameters. A search of electronic databases including, JStor, and Google Scholar, as well as holdings through York Universities library system was conducted together with a manual search of reference lists and bibliographies of identified articles and reports to obtain additional source material. Some of the search terms included 'cognitive biases', 'corporate climate action', 'values-driven management practices' and 'cognitive biases in environmental action'. Websites and documents published by the respective corporations and international sustainability bodies, as well as change and leadership management publications were used to ground theory in the realities of each of these corporations. This multi-modal search strategy aimed to yield a complement of books, book chapters, peer-reviewed articles, abstracts, reports, and websites.

After identifying source material, I selected key sources and extracted relevant information that would guide my understanding of both the subjects of environmental psychology and management theory as well as of my interview subjects themselves. Key themes extracted from these publications include human psychology in the office, the role of cognitive biases in decision making, cognitive biases that stall climate action, management for change, corporate leadership for sustainability and corporate strategies for sustainability. A comprehensive literature review is available within my MES Plan of Study.

Although a portfolio approach to an MES cumulative piece of work does not require a comprehensive literature review, it is important to note that much of the literature, and the review in itself, informed my thinking as I developed the interview guide and conducted one-on-one interviews. The literature review also supported the analysis of interview responses. I was able to compare interview responses against heuristic frameworks to determine which cognitive biases were most prevalent across a variety of industries.

Interviewee Selection

Interviewees were selected based on their potential to represent corporate leadership in high-impact sectors. High-impact sectors include: The oil and gas; food and agriculture; mining and technology and government sectors. Two government leaders were also included in the study to round out an understanding of the external partnerships and policies that influence corporate strategies. Potential interviewees were selected based on their institutional affiliation, position/job title, public profile, and/or personal and professional networks that would offer insights into

corporate strategies and challenges when addressing climate action. Ten corporate and government leaders were interviewed across Canada with the intent of identifying similarities in leadership thought and action across various industries. The study required data gathering from the highest levels of seniority, representing those with the power to create company-wide mandates as well as advocate for industry-wide transformation. Participants were selected in consultation with each company to best represent key social variables such as age, gender and ethnic background. Reasons and limitations to the diversity of social variables have been noted.

Interviewees were selected based on their capacity to offer insights into industry standards and best practices as well as their willingness to acknowledge climate challenges and declare themselves as leaders in shifting towards sustainability. They were also selected based on their willingness to participate in the study.

Interviews

I identified key individuals working in leadership positions across Canada and after some discussion with the Academy for Sustainable Innovation, about my research, was connected to these individuals via email. I invited them to participate in a 30-minute video interview on the subject of a corporate culture for sustainability and its potentially positive impact on the low-carbon economy.

During the period of November 2018 and May 2019, I conducted face-to-face, video interviews with a sample of pre-selected leaders and change managers at Canadian corporations in the oil and gas; food and agriculture; mining and technology and government sectors. The interviews

were conducted using the pragmatic constructivist approach⁸, as developed in the work of Merriam⁹. This approach asserts that case study research can use both quantitative and qualitative methods however methods aimed at generating “inductive reasoning and interpretation rather than testing hypotheses take priority”.¹⁰ Following Merriam’s example, I selected companies for study based on what they could reveal about sustainability strategies and challenges within a corporate context rather than tailoring all questions around a hypothesis; to garner a “rich, holistic description that illuminates one’s understanding of the phenomena”¹¹. The pragmatic constructivist approach fits perfectly within the nature of the interviews as it remains guided by the study principles and parameters while at the same time offering a more flexible approach to the rigorous “empirical inquiry” that comes with a realist-post positivist approach.¹² Interviewees were selected based on what they could reveal about values-driven leadership and sustainability mandates within their workplace and not necessarily from their potential to prove any hypothesis.¹³

Interviews were semi-structured with open-ended questions. Although I prepared a list of questions associated with my learning goals, the interviews unfolded conversationally. While I aimed to keep the conversation on topic, I was otherwise non-directive, allowing for the

⁸ Merriam, Sharan B. *Qualitative Research: a Guide to Design and Implementation*. 2nd ed., Jossey-Bass, 2009.

⁹ Merriam, Sharan. “Qualitative Research and Case Study Applications in Education. 2nd ed., Jossey-Bass Publishers, 1998.

¹⁰ Harrison, Helena; Melanie Birks; Richard Franklin & Jane Mills. *Case Study Research: Foundations and Methodological Orientations*, Forum Qualitative Sozialforschung, 2017.

¹¹ See: Merriam (1998)

¹² Harrison et al. (2017); Yin, Robert K. (2014). *Case study research: Design and methods*. Los Angeles, CA: Sage

¹³ Yazan, B. *Three Approaches to Case Study Methods in Education: Yin, Merriam, and Stake*. The Qualitative Report, 20(2), 2015. 134-152.

interviewee to explore the subject from as many angles as possible, as suggested by Longhurst and other social scientists¹⁴. This was in line with Merriam's pragmatic constructivist approach; guiding the interviewee to stay on topic without asserting discussion boundaries that would inhibit free-thinking and/or a holistic understanding of the subject in question.¹⁵ Questions focused on gathering information on the interactional dynamics of work activity, learning in all its forms and the design and implementation of structured sustainability initiatives. Detailed field notes and audio-video recordings provide additional insights into key practices that are either difficult to describe in interviews and/or which display 'seen but unnoticed'¹⁶ tacit dimensions in which I examine sociological factors that are considered to be natural, background features of everyday scenes.

I chose videography as the medium through which my research may be delivered to the academic community because I believe that it inherently highlights the nuance in conversation; displaying nonverbal communication and telling a greater story than would have otherwise been conveyed through text. It offers audiences a rare look into the personality and character of the executives running the largest corporations in Canada which, for my audience; like-minded students of business and sustainability, is an extraordinary opportunity. The convenience and accessibility of stimulating content is an additional unique draw. I was inspired by a Vox News, Johnny Harris' style of videos which highlight social, environmental and political issues through a blend of

¹⁴ Longhurst, Robyn, et al. *Semi-Structured Interviews and Focus Groups*. Key Methods in Geography, edited by Nicholas Clifford and Meghan Cope, 3rd ed., Sage, 2016, pp. 143–153.

¹⁵ See: Harrison et al. (2017); Merriam (1998, 2009); Yazan (2015)

¹⁶ Garfinkel, H. *Studies in Ethnomethodology*. Englewood Cliffs, NJ: Prentice-Hall. 1967.

motion graphics and cinematic videography. His narration and videography style delivers content that explains complex issues in relatable ways, a skill I hoped to replicate.

The final video interviews have been compiled into a portfolio for presentation to students and faculty in the Environmental Studies Department at York University. The final product will serve as an educational piece for the public on corporate leadership action in shaping a low-carbon economy in Canada. As such, the interview responses, as filmed on video and captured with audio, will be made public and will not be kept confidential unless participants directly express wanting to be excluded from the portfolio.

Key informant interviews

I developed a template interview guide that was slightly adapted for each participant (see appendix). The results from the literature review informed the domains of inquiry as well as the specific questions.

The interviews began with a discussion of the participant's background and the work of their organization and the question "how do you view your role in Canada's transition to a low-carbon economy". This was followed by a discussion of the ways in which the interviewee's organization recognizes and challenges their carbon footprint. We then turned to a discussion of the participant's perspectives on what a corporate sustainability change management plan would look like with a specific emphasis on financing, structure, values, approaches, company priorities and current practices. We explored enablers, barriers and opportunities associated with moving toward

a low-carbon economy and concluded with a discussion of relative next steps, specifically, the interviewee's vision for the future and how they imagine their leadership approach will evolve accordingly.

I conducted as many interviews with key informants as I was able to schedule and confirm across Ontario and Alberta, over a 5 month period between January and May 2019. The sessions were video-recorded (with permission) and I took extensive notes during the interviews and wrote analytic memos after each encounter. The video-files, notes, and memos from the interviews were analyzed for content and themes.¹⁷

Analysis

The analytic plan involved both deductive and inductive techniques. Initially, I analyzed each component of the project separately. In the final analytical phase, I integrated the findings, paying close attention to concordant and discordant results and differences between the literature, key informants and the company documentation of their respective companies. This process allowed me to generate recommendations, outlined on page 18.

Analysis of responses, in terms of the context of learning, followed Merriam's descriptive and thematic content analysis including triangulation where applicable. Whilst Yin's realist-post positivist approach "consists of examining, categorizing, tabulating, testing, or otherwise recombining both quantitative and qualitative evidence to address the initial propositions of a

¹⁷ The analytic plan consisted of triangulating data to identify and explore common themes. See: Deniz and Lincoln (2005).

study”¹⁸, I found Merriam’s data analysis process to be a much more natural fit for my research. Merriam defines data analysis as “the process of making sense out of the data. And making sense out of data involves consolidating, reducing, and interpreting what people have said and what the researcher has seen and read – it is the process of ‘making meaning’ .¹⁹ The structured flexibility of Merriam’s approach is rooted in the premise that there are multiple versions of knowledge since it is a product of a construction between all those continuing to learn and evolve²⁰. Merriam’s conception of data validation contends that “the qualitative study provides the reader with a depiction in enough detail to show that the author’s conclusion ‘makes sense’ .²¹ Merriam’s years of experience in conducting qualitative research yield these time tested recommendations: “using findings from previous observations to guide the next observation, track your ongoing learning with written memos and test your ideas and themes with participants” by asking them how they interpret their environment.²² I integrated this approach into my research by asking interviewees if they have ever made note of specific psychological phenomena within their working environments. For example, as I learned about the importance of democratic, collective learning²³ in solidifying a culture of sustainability that challenges mental barriers to action, I began asking participants how they have worked to evoke these or other processes within their own organizations as they work to bring others along on their journeys.

¹⁸ See: Yin p. 109 (2002)

¹⁹ See: Merriam p. 178 (1998)

²⁰ See: Yazan (2015)

²¹ See: Merriam, p. 199 (1998)

²² See: Suter (2012)

²³ See: Reconstructing value : leadership skills for a sustainable world. Elizabeth C. Kurucz, Barry A. Colbert, David Wheeler. (2013)

While some literature suggests that this is too flexible an approach and that Yin's more concrete internal and external validity tests (including pattern matching, analytic generalization and triangulation of multiple sources of evidence, chains of evidence and member checking) are more rigorous tools of analysis, when it comes to the subject of corporate sustainability, for which there is no set playbook and will ultimately be interpreted differently within every workplace, I believe Merriam's concept is better suited.

Findings

Barriers

While previous research has suggested that climate change inaction by corporations has been the result of regulatory uncertainty, short-term economic pressures or compensation structures linked to environmental exploitation, the role of cognitive biases or heuristics may be equally impactful on decision making. Through my research, I found several common cognitive biases at play within the corporate structure that act as barriers to environmental progress.

Perception biases

Mazutis and Eckardt (2017) describe the first category, perception biases, as rooted in "the inability of people to conceptualize events and consequences that they have not yet

experienced”²⁴. Concepts such as implicit bias²⁵, selective perception²⁶, issue framing²⁷ and loss aversion exist within this category. Out of the ten interviews that were conducted, nine of the interviewees acknowledged²⁸ perception biases as a barrier to climate action at work. This was identified primarily in the experiences of interviewees having needed to reframe the conversation around climate change to support participation. While each interviewee noted the collective recognition of climate change amongst employees, each noted having needed to communicate the importance and the relevance of sustainability to the company specifically whilst impressing upon others that environmental shifts would not result in financial loss and may in fact generate financial benefits.

Issue framing is a widely-discussed concept which explains how people react differently to a situation based on how it is worded or presented²⁹. For example, framing climate change in vague or uncertain terms has proved ineffective as it suppresses any sense of urgency. As a result, climate change fails to be identified as an issue requiring action and instead these messages widen the psychological barrier to progress³⁰. When it comes to communicating the threat of climate

²⁴ Dana Mazutis and Anna Eckardt wrote a paper in 2017 that largely influenced my interest in studying corporate cognitive biases. See ‘Sleepwalking Into Catastrophe’ for more information.

²⁵ Definition of implicit bias: individuals hold attitudes towards people, or associate stereotypes with them, without being aware of this. See Project Implicit (2011) for more information on implicit biases.

²⁶ Definition of selective perception: individuals select information that aligns with their existing knowledge and belief systems while blocking out stimuli that contradicts it. See Oxford Reference (2019) for more information.

²⁷ Definition of issue framing: individuals form attitudes towards issues based on whether the information is presented with positive or negative semantics. See The Community Toolbox (2018) for more information and resources.

²⁸ Interviewees were not asked directly about ‘perception biases’ but were instead asked about their workplace culture, barriers to environmental progress and communication challenges that they have personally faced which could illuminate the potential cognitive biases at play.

²⁹ See: Spence (2012) and Tversky and Kahneman (1981)

³⁰ See: Spence, et al. (2012)

change, issue framing is important since many people have yet to experience the real-world consequences of environmental destruction and thus cannot see the relevance of the problem. For example, Lynda Kuhn, the Senior Vice President & Chair, Maple Leaf Centre for Action on Food Security, explained how she reframed the concept of corporate social responsibility (CSR) within the organization to help make the case for financial investment.

“Organizations think about sustainability as CSR, as some kind of social license to operate and when you come at it from that perspective, it’s always going to be marginalized, it’s always going to be you know, the CSR person, it’s more about corporate giving, it’s more about our image and our reputation and much less about ‘how is this going to be embedded in our business processes’. And it’s actually the path to profitable growth. So when I was asked to move from a communications role to a leading sustainability role, it was very much for me about how do we find the right intersection between what we need to do as a corporation to advance social and environmental issues and address those in a meaningful way, as well as drive profitability because if you don’t hit both of those then you’re not going to get the attention that it deserves.”

Ms. Kuhn took what would have been, as she describes, corporate efforts to solidify Maple Leaf’s “*image and reputation*” through do-good activities and shifted the frame to allow for more purposeful corporate action as it relates to the environment and community. Communicating this took time, however. Lynda describes a three-year process of breaking down the company’s environmental impact to the highest levels of leadership and validating the importance of improving upon each sector. She began by auditing each part of the organization’s operations, before ultimately weaving the pieces together into the company’s first sustainability report. She

says that her thinking was: *“let’s do a snapshot of where the organization is today and get people comfortable with the notion of formalizing a process and a structure around sustainability’ and that kind of lead into ‘how do we embed sustainability into our business processes.”* From there, Maple Leaf began transitioning from a ‘meat’ company to a ‘protein’ company; diversifying in the name of sustainability and global competitiveness. By breaking down a complex problem into a plan that seems relevant, manageable and achievable for employees; reframing it to mitigate perception biases, Lynda created space for environmental consciousness at Maple Leaf.

Michael Crothers, the President and Country Chair of Shell Canada, also spoke about reframing the discussion. He explained, for example, the importance of diversifying the energy portfolio to secure the company’s relevance and competitiveness on the global stage throughout the transition. *“It’s about being a viable sector for the next 20-30 years while a transition occurs. We see as Shell, we see the transition happening. We see that oil and gas, over time, will be less important in the world’s energy mix.”* Here, the emphasis is placed on securing profitability and viability of the company long-term, rather than on the environmental drivers themselves.

Reframing the discussion in this way is often referred to as making ‘the business case for sustainability’; mitigating perception biases using business language.

From a government perspective, it appears that some Canadian environmental policies have also been created with perception biases in mind; using an understanding of loss aversion to strengthen corporate interest in sustainability. The human aversion to loss encourages decision-makers to be concerned primarily with short-term sacrifices, rather than long-term benefits of environmental solutions. This often interferes with big-picture thinking. Bob Savage explains how the Ministry

for the Environment creates policies with this aversion in mind, highlighting the losses that can arise should companies not make business decisions with climate in mind:

“Some of the policies that we put in place provide something of a disincentive for greenhouse gases. Some are more of a carrot approach to attract capital and incentivize investment choices and decisions or reward them for changes. So, for example we regulate large emitters in the province and we tell them that they have to improve their performance. If they don't, they can pay a penalty. Or, if they choose to voluntarily reduce, they can earn credits that they can use there or at their other facilities.”

He also described the market drivers that tap into that aversion to loss, as investors begin to reward business shifts towards sustainability.

“You know, we produce oil and we have difficulties getting it to market. So the concerns around it are really carbon intensive relative to other choices. That's not changing. There are other choices for people to invest in and purchase their energy from and that pressure is going to increase. So when we talk to industry leaders, the narrative is all about wanting people to invest in themselves to reduce their environmental footprint and maintain their competitiveness.”

In this sense, the aversion to loss (loss of market share and loss of investment), creates an incentive to pursue less carbon-intensive energy options which may mitigate those immediate losses.

Volition Biases

Volition biases come into effect through a perceived loss of agency.³¹ These biases, including general and professional volition bias, encourage decision-makers to remain inactive, minimizing issues that they interpret as out of their control or irrelevant to them personally. In a corporate context, this often plays out as the lack of a perceived “business case”³² and allows for the diffusion of responsibility elsewhere.

Volition biases strip the decision-maker of their perceived responsibility of an issue, dismissing it as irrelevant to their purpose. To combat these biases, reframing the question of responsibility is important. Instead of perpetuating the traditional ‘*what should we do*’ narrative; which questions the responsibility of businesses in making societal or environmental change, successful leaders are reframing the question as: ‘*what can we do*’. They expand this question to include that which they can do which places the organization at a strategic advantage and is also innovative, exciting, and engaging for employees.

Frances Edmonds, the Director of Sustainability at HP Canada, holds a business’ responsibility to the environment and to the people as a key driver in HP’s sustainability plan. In her interview, she said: “*It’s really from our founding fathers who said, the purpose of HP is to make a difference and that it’s everybody’s job to contribute to society, not just a few.*” She goes on to explain how the company can leverage its excellence in technology to benefit the greater good:

³¹ See: The psychology of volition, Chris Frith (2013) for more information.

³² See: Whelan (2016); Willard (2017); Wilson (2003); Winston (2018)

“We’re a technology company. [We asked]: what could we do to leverage the power of technology? So our focus from a CSR strategy was on disadvantaged communities, education and technology. Those are the three areas where we really feel we can hit the ball out of the park and leverage the power of HP as a global multi-national, we can do some pretty amazing things. So for instance, we have a goal to educate 100,000, to improve learning outcomes for 100,000 people around the world by 2025. Think about that!”

Unfortunately, the majority of businesses seem to remain rooted in Milton Freedman’s 1970s narrative which depicts a business as a profit-earning entity and nothing more.³³ Today’s leaders in sustainability are tasked with overcoming this perception to push forth a low-carbon, socially-just agenda. For example, Michael Crothers explains how Shell communicates the business case for the environment to potential partners as they look to work with others on innovative solutions. *“I think the challenge is determining how it actually makes sense for their business in terms of a long-term viability of their business. I think as business people, they want to be persuaded that this is the smart investment to make and it actually isn’t counterproductive to their shareholders’ interests.”* Mr. Crothers describes what is commonplace for the majority of business leaders; the practice of minimizing environmental externalities in favour of a clear responsibility to their shareholders and thus prioritizing shareholder value.³⁴ While there are alternative viewpoints which oppose this narrative,³⁵ it seems that most of the study participants have found it most

³³ See: The Social Responsibility of Business is to Increase its Profits, Milton Friedman, The New York Times Magazine, September 13, 1970

³⁴Milton Friedman (1970)

³⁵ See: The Shareholder Value Myth, Lynn Stout (2012) and Managing for Stakeholders, Edward Freeman (2007)

practical in the short-term to describe a 'business case' for sustainability which allows for the decision-maker to perceive an immediate responsibility to take on environmentally-friendly alternatives to their current modes of operation; instead of working to convince them that their purpose is to serve the larger community over shareholder interests.

Kevin Davies, the founder and CEO of Hop Compost, also describes the pull to defend the economic incentive for his clients, focusing on "*developing a solution that doesn't require a sacrifice for our partners.*" He believes that, "*people will resist a message if it is to the public benefit but not to the private benefit*" and thus revolves much of his business model around an economic imperative. While both acknowledge their own internalized sense of responsibility towards the environment, neither place it as the primary driver for industry change, nor do they use it as a communication tool when encouraging others to join in environmental efforts. It seems that these common volition biases are recognized by industry leaders; they acknowledge that others in their field feel unjustified and inappropriate acting on behalf of the environment when they perceive their responsibility as aligned with shareholder value optimization. However, the majority of efforts to challenge these biases are not really to challenge them at all but to appease them; finding a way for decision-makers to validate environmental action as a means of profit, without renewing their own sense of agency as a leader of change through what is and will continue to be a climate crisis.

However, there seems to be more of an incentive for C-suite leaders to challenge and dismantle professional volition bias within their workplaces. The professional volition bias holds professional conventions as the guiding principles for action. Obedience to authority, especially

within the traditional hierarchy-based, status-quo-centered corporate context, offers employees the excuse to relieve themselves from actions that fall outside their job description. Much of the literature describes “authority bias” which traps employees in “obedience mind-sets”.³⁶ However, when these biases are challenged and employees feel more empowered to embed their personal values throughout their work, studies have shown that employees are more productive, more engaged and more dedicated to their jobs as a whole.³⁷ This may be perhaps why leaders showcase more of an interest in breaking down these barriers. Out of the ten interview participants, five participants recognized professional volition biases as an impediment to climate action. Frances Edmonds, the Director of Sustainability at HP Canada, explains how these professional biases can be counteracted simply by giving those around her the confidence to act in favour of climate at work.

“I found actually early on in my career at HP, that people would come to me and say “well I want to do this because it’s the right thing to do” and even if I wasn’t their manager and didn’t have anything to do with managing them, they just came to me to ask for permission to do it and I would say, “Sure! Go ahead! Do it!” You know? So people were asking me for permission even though I had no responsibility for giving it to them, they just needed that little pat on the head to say yes, it’s the right thing, off you go and do it. And you’re therefore enabling them and that’s what you need to do.”

³⁶ See: Mazutis and Eckardt (2017)

³⁷Bertels (2010); Burnes (2000); Collins, J, and J Porras (2001); Ind, Nicholas. (2003)

Studies have shown that the most effective way to challenge volition biases is by recasting authority; giving employees permission to take charge outside of their traditional roles and spearhead sustainability initiatives. Similarly, implementing a multi-level approach to organizational changes is often recommended to enable buy-in, encourage organizational ownership and solidify genuine commitment.³⁸ When looking to implement strategies that cut across the organization, the most effective organizations have worked to break down the organizational silos that segment responsibilities between departments and instead, have integrated a plan that invites participation at all levels.³⁹ Out of the ten participants interviewed, five recognized an intentional integration of ideas and efforts across all levels of the organization.

Nadine Gudz, the former Director of Sustainability at Interface, explained how each employee receives sustainability training based on a common curriculum to ensure “*consistency in how the story gets introduced, across the business, regardless of what your role is and where it is that you work*”. When it was time for the company to shift from Mission Zero, a vision to eliminate all carbon emissions from the organization’s work, to Climate Take Back, the next step in the sustainability story, of which the purpose was to reverse global warming and create a climate fit for life, Nadine explains how employees were at the core of the movement. The company reached out to employees all over the world to create a vision for Interface that held a diversity of invested perspectives at the core. “*The mission was developed based on important exercises, one of which being, our team reached out to employees all over the world, in 2015, to ask what they believed was next for Interface. So, we did focus groups and interviews and surveys and really wanted to*

³⁸ See: Bertels (2014), Burnes (2000), Collins & Porras (2001)

³⁹ See: Hoffman and Bazerman p. 95 (2007)

understand what employees believed was the next steps in sustainability and a lot of common themes came out of that research, out of that work, including, the next mission needs to feel just as impossible as Mission Zero did in 1994; eliminating any negative environmental impact from your supply chain felt impossible. So, the feedback was that the next one needed to feel just as impossible. It needed to be just as bold. It needed to be extremely aggressive and it was time for Interface to go beyond making its own business sustainable and take on the world's greatest sustainability challenges. Which, at the time, the feedback was, employees were highlighting global climate change as humanity's greatest challenge. It's time for Interface to take a more aggressive, bolder approach to this. So employee engagement and feedback was critical in determining this next very important step for the company and largely informed the future direction for the business as far as sustainability goes."

Michael Crothers also attests to the value that he's found in breaking down these organizational silos and garnering multi-level organizational feedback at Shell. *"It's a huge commitment of time for leadership but if we really want to create change, you've got to sit with your people and have the debates. And bring them on board and hear their ideas. As a leader I find that incredibly helpful. I don't have all the answers. But we have a direction. And so, if you invest the time with your people, you can then start to move forward. People might say, well I don't have the time to have 20 small group engagements but if you don't take the time, you'll have many false starts. And you won't be able to unleash the capacity of your organization effectively."*

Developing cross departmental groups with clear responsibilities and accountabilities can help to set up a more deeply integrated approach to change while building broader organizational

capacity for sustainability. In the case of HP and Interface, it also helped to solidify a culture of sustainability in such that employees could not possibly question the personal relevance of company initiatives- their thoughts, perspectives, jobs and responsibilities are each deeply embedded within it.

Opportunities: Sustainability Lessons learned from Canada's Leaders in Business

Creating a Culture of Leadership

In the fourth decade of his career, John Bianchini, the CEO of Hatch, recognized that in spite of the technical excellence of his team, something was missing. *"I've realized that society, well our company first, but society, is limited in its development because of good leadership. We need to create better leaders,"* he told me. He described a culture of innovation, efficiency and technical excellence that had been the driver for the organization's global success but found that the engineers and technical people on his team were lacking in the *"hard skills"* required to drive the company forward. He says: *"It's actually easier to develop strong technical skills in engineering, math, physics, project management, those are easily learnable- those are the soft skills. The hard skills are actually emotional self-awareness skills."*

After three global employee surveys brought to light some employee frustrations, John and the executive team re-wrote the company's manifesto and created the 'Manifesto Driven Leadership Program (MDL): a program focused on reframing the work at Hatch and rooting it in values-driven leadership. *"We have a manifesto that says 'this is who we are, this is who we choose to be.' We can choose to be anything that we want, we're not in business to make money. Money is*

an outcome of what you do. What are you in business for? What is your raison d'être, as the French say? And we've decided that our reason for being is to use our technical and business skills to make a better world. We call that positive change." The program targets middle-management leadership first, the cohort that Mr. Bianchini believes has lost sight of their values the most, after having been with the company for upwards of 30 years. MDL is meant to serve as a reminder of the values, passion and expertise that initially drove team members to join Hatch. The people at Hatch are innovators; they are problem solvers. The question remains, how can Hatch apply these abilities to solve the world's toughest challenges and enhance the life cycle and value chain of Hatch's projects? Mr. Bianchini's thinking holds Manifesto Driven Leadership as the key to the organization's success. Since the organization's implementation of the program, they have released a new technology: Dry Slag Granulation, which turns leftover material into marketable products in a semi-circular model without the use of water. The innovation offsets 700 kilograms of carbon-dioxide equivalent per ton of cement in the process of converting slag into cement⁴⁰. While the MDL program is still being piloted, if implemented successfully across the organization, employees at Hatch will build upon the existing, but often overlooked, social identity of leadership, innovation, social responsibility and creativity all while developing the 'hard skills' required to transition the organization into a low-carbon future. If implemented successfully, the program will offer natural links between the organization's environmental and social goals and the collective identity that employees are continuing to solidify- embedding sustainability within the heart of the organization. Mr. Bianchini says that while they received positive feedback from their clients about the transition, the process was not initially well-received by employees. *"We realized that people weren't connecting with it. Why aren't people*

⁴⁰ Hatch (2018)

connecting with it? Our customers... we rolled it out to our customers and they said 'this is great! You're the first company, service provider who is actually speaking to this and we want to partner with you. Our market share took off! [But] our own people, were a bit cynical. [They said] 'Ah come on, this is just marketing.' Oh no, we're going to believe this. And all, the majority of our employees got this, intuitively but not enough and not deeply enough and not broadly enough. So we're putting them into three pilots in three days. And at the end of every pilot even the most cynical friends here at Hatch said 'we should have done this decades ago. This is so, some people have come back to me and said 'John this hasn't just helped my career here, it's helping at home.'

While⁴¹ perception and volition biases may act as an impediment to initial change in many companies, a top-down mandate and dedication to change can help to expand capacity within even the most carbon-intensive industries. There is an opportunity here for business, government and civil society leaders to follow suit; shaping leadership programming for their people that will root environmental and social initiatives in their natural talents and foundational values. By reframing the low-carbon, social-justice conversation around a collective social identity, employees are invited to see the relevance and personal value in company-wide sustainability mandates.

Utilizing Existing Tools for Climate Action

In order to be most effective, leaders should maximize their impact by leveraging existing operational tools that are already part of the company experience. Human nature is such that we tend to select information that aligns with our existing knowledge and belief systems while

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blocking out stimuli that contradicts it. By spring-boarding off of existing procedures and innovations, leaders may temper the implicit and selective perception biases associated with the integration of new and/or foreign objectives. Maple Leaf Foods for instance, has a strong mandate for climate action and social justice which intersects with their core business strategy however, sustainability has yet to permeate throughout all levels of their business. They lack a culture of sustainability. What they do have, however, is a strong health and safety culture, developed first after the 2008 listeriosis outbreak which resulted in 22 deaths and a precautionary \$20 million recall of its products⁴², and again in 2016 with an even more powerful program; rooted in behavioural change. The latter may be used as a springboard for the development of a climate-action culture.

In 2016, after identifying opportunities for improvement within their Health and Safety plan, Maple Leaf developed “behaviour observation tools”, otherwise known as BBS, to tackle the challenges. BBS “assists in the identification of opportunities for improvement through behavioural trend analysis (with transparent data) of safe and unsafe behaviours”⁴³. In 2016, they rolled out a behaviour tracking tool and enlisted the systems in all of their production sites. If a behavioural concern was identified, corrective action was taken and the employee who identified the issue is recognized and rewarded for their commitment to change.⁴⁴ This is a potentially powerful tool for behavioural change within Maple Leaf’s sites as it incorporates both positive reinforcement for employee cooperation and corrective action where needed. Through behaviour

⁴² See: ‘Keeping You and Your Family Safe’ campaign (CBC News, 2008)

⁴³ Maple Leaf (2017, p. 53)

⁴⁴ Maple Leaf, (2017, p. 53)

observation and tracking, Maple Leaf is positioning itself to achieve its goal of zero occupational injuries. In fact, as a result of the company's actions, the team has already realized an 86.6% improvement in their Total Recordable Injury Rate compared to their 2012 baseline.⁴⁵

Additionally, Maple Leaf initiated a 'Zero Hero Safety Club' recognition program for their sites in hopes of eliminating occupational injuries. "Sites become members of the Zero Hero Safety Club when they achieve zero occupational injuries and meet other criteria".⁴⁶ Within one year, 16 of Maple Leaf's sites had already been recognized as members of the Zero Hero Safety Club.

How can these tactics be applied to Maple Leaf's environmental initiatives to more holistically embed the program throughout their operations? All three of these initiatives can be adapted with an environmental mandate at the core. Maple Leaf has already developed a framework for sustainability initiatives and can easily develop an equivalent to the 'six core rules' framework to reflect their vision. The adherence to these rules could then be monitored with the same behaviour-based tracking tool and be reinforced with both employee recognition for good behaviour and corrective action otherwise. Finally, sites can and should be recognized for their efforts through a similar program to the 'Zero Hero Safety Club', celebrating their sustainability achievements at the end of the year.

⁴⁵ Maple Leaf, (p. 50)

⁴⁶ Maple Leaf, (2017, p. 53)

By leveraging existing tools with climate in mind, businesses have the opportunity to create change that aligns with their existing operational capacity and does not appear radical or foreign to those who may not see sustainability as relative to their roles.

Doing Well by Doing Good

The leaders who are paving the way forward in sustainable business have found a way to embed environmental action at the core of their business. By revolving company operations and profits around a sustainable purpose, volition biases rooted in professional conventions will be intrinsically linked to environmental performance. Hop Compost, for example, has a product and a system of operating which promotes sustainability inherently through a closed-loop food waste system. Hop's patented technology automates the composting process in inner-city facilities, creating rich, organic compost out of food waste collected from urban restaurants and grocery stores. Their technology allows for facilities to be located close to the main cities without community discontent associated with the traditional waste management practices. Not only does their business repurpose food waste and facilitate organic farming practices but the location of the operations reduces emissions by cutting up to 85% of waste hauling trips⁴⁷. Kevin Davies, the Founder and CEO explains: *“There's no way for us to grow without benefiting the environment or social conditions. The larger Hop gets, ultimately the more waste we save and the more organic alternatives we produce to fertilizer so it really is inherent to our operations. I think for people*

⁴⁷ Hop Compost (2019)

who are starting new companies, it's important to start from that point as opposed to mitigate externalities. I think that's flipping it so that you're maximizing your benefit by growing that approach and I think that ultimately it makes the company more competitive. It's really the way that the market is heading is to adopt more and more sustainable alternatives so really I think by virtue of having it as the core of your business, you're able to attract better employees and get your foot in the door with large customers where you may not have been able to otherwise."

While there will certainly be opportunities for Hop to push the boundaries to continuously reduce the carbon intensity of their operations as they scale, creating business value out of a catastrophic environmental issue like food waste is a model that entrepreneurs should look to replicate as Canada transitions to a low-carbon economy. There may be no better way to mitigate professional volition biases associated with traditionally unsustainable professional conventions.

Conclusion

While climate change may be the definition of a 'perfect'⁴⁸ or a 'wicked' problem⁴⁹, the psychological barriers associated with climate action can be successfully challenged once identified. Cognitive biases related to perception and volition thrive in corporate environments because of the normative perceptions of roles and responsibilities within a hierarchical business structure that limits perceived ability to act outside of the norm. However, it is important to acknowledge the questions, fears and stressors that encircle the climate crisis for all of us. It is

⁴⁸ Marshall (2014)

⁴⁹Incropera, Frank (2013); Levin, Kelly et al. (2012); FitzGibbon, John, et al. (2012)

true that many of those working towards sustainability, both within and outside of the corporate context, often feel overwhelmed by the scope and complexity of the problem. However the conditions of human denial, avoidance and the general diffusion of responsibility that accompany a retreat to cognitive biases⁵⁰ are counterproductive to a movement which requires bold and disruptive changes across industries. In order to combat these natural tendencies, leaders must reframe the conversation around climate change to focus on the possibilities and opportunities; encouraging collaborative, social learning throughout their organization and beyond. Fortuitously, this study may offer several optimistic examples. For example, technology companies like HP are reducing the environmental footprint of their own operations through sustainable procurement and building efficiency strategies while also using their talents to deliver education and technology to 100,000 people in disadvantaged communities around the world. ‘Meat’ companies like Maple Leaf are reframing their purpose and expanding as ‘protein’ companies; shifting their product portfolio and transitioning towards sustainable food sources while they fight to reduce food insecurity across Canada⁵¹. Oil and gas companies like Shell are becoming ‘energy’ companies; drawing more and cleaner energy from renewable sources. Manufacturing companies like Interface are becoming challenging themselves to eliminate all carbon from their operations and are working to bring industry along with them. The world is changing. Let us learn from Canada’s business, government and civil society leaders as they challenge the nature of those within their organizations and their industries. Let us use our unique skills and sets of knowledge to build upon their strategies for change. Let us be optimistic, driven and dedicated to shifting mindsets as

⁵⁰ Hoffman and Bazerman, 2006; Weber, 2006

⁵¹ Maple Leaf has a bold goal of reducing food insecurity in Canada by 50% by 2030. See: Maple Leaf Centre for Action on Food Security (2019) for more information.

we accelerate what will be a transformational transition to low-carbon industries across Canada and around the world.

Appendices

Website and Video

The video piece on The Psychology Behind Corporate Climate Action, including footage from the video interviews can be found at the following link:

<https://nicole2661.wixsite.com/website>

Interview Guide

VIDEO INTERVIEW GUIDE

What you'll find in this document:

Overview	The purpose of the video interviews, a timeline for completion and desired outcomes.
Format	A proposed plan for interviews and the format of resulting content
Video Study Content	A list of concrete learning objectives and sample questions and a breakdown of videos by proposed theme/focus. This will act as a guide for the collection of raw information from each interviewee.
Academic Background	An explanation of the theories used as the basis for the collection and analysis of raw data.

Overview:

The purpose of the interview series is to build a rich library of educational video interviews and short explanations of common approaches to decarbonizing the Canadian economy, from the perspectives of corporate sustainability leaders. The completed educational series will serve to:

- Showcase business' commitment to sustainability through disruptive and innovative solutions
- Accelerate the growth and impact of sustainability initiatives across Canada by demonstrating the replicability and scalability of these efforts
- Amplify visibility and encourage investment in disruptive solutions to environmental sustainability

Proposed Timeline:

First four interviews	December 2018
Editing + transcript creation from interviews	Begins January
The second wave of interviews	Late January 2019 – early March 2019
Editing + publishing of full interviews	Editing will take place from April 2019 - July 2019 The portfolio of organized interview responses will completed in time for August 2019 defense.

Format

- Interviews will take place at several locations across Canada in Ontario, Ottawa, and Calgary.
- Interviews will take approximately 30-45 minutes to film with a resulting 10-15 minutes of content
- Interview answers must be kept to 30 seconds-1 minute in length
- Three cameras and three microphones will be used to capture footage
- Interview energy should be candid and personal with a deep-dive into CEO/VP's personal

journey with sustainability, values and key insights

- Finding the commonality within interviewee experiences will allow for compilation of responses around popular themes. (See table pg. 3-6)

Video Study Content

This table describes the broad learning objectives for each video interviews along with the proposed interview subjects and sample questions designed to achieve the learning goals.

Each interview must include:

- a) An introduction by Nicole that includes a brief description of the organization and the interviewee’s role within it, the major sustainability goals they are working towards and the progress they’ve made.
- b) Answers to questions from at least three of the key themes in the following table:

VIDEO THEME	EXPLORES	SAMPLE QUESTIONS
Creating a Low-Carbon Corporate Culture	<p>Best practices and successful experiences with shifting corporate culture</p> <p>Values-based management practices</p> <p>Getting buy-In from senior leadership and employees</p>	<p>How is sustainability understood at <i>your company</i>?</p> <p>Tell me how <i>the company</i> decided on <i>the steps taken to make their operations more sustainable</i>.</p> <p>There are many approaches that experts suggest to ensure that sustainability practices take root in businesses. Which approach has worked for you and what do you think led to its success?</p> <p>What steps did you/they take to get the team on board?</p> <p>What was the turning point for the initiative? When did it really begin to take shape?</p> <p>Did these efforts naturally align with _____’s mission or did you see a shift in values throughout the <i>initiative</i>’s implementation?</p> <p>Did <i>the initiative</i> naturally align with <i>the company</i>’s overall business strategy? If not, has it since become part of it?</p>
Innovations	<p>How sustainability has manifested itself in products/services</p> <p>How to decide upon a strategy and execute a shift in operations</p>	<p>What was it that inspired this innovation?</p> <p>How did <i>the company</i> know that this was the avenue to pursue?</p> <p>Was the company well-positioned to integrate this innovation into their operations or did it require bigger changes?</p> <p>What have been the results of the innovation? How do you envision this impacting industry?</p> <p>How do you maintain belief in your vision when faced with adversity?</p>

Engaging Industry	Ensuring the longevity of an innovation or practice	<p>What do you see as the most pressing transition issues at 'your company' and for the _____ industry more broadly?</p> <p>What do you see as the strategic drivers for industry-wide change?</p> <p>What does the future of the _____ industry look like to you?</p> <p>Did you receive any support from within or outside <i>the company</i> to achieve your goals? Which supports did you find most valuable?</p> <p>- Ex: events that built knowledge/capacity, 1:1 coaching, etc.</p>
Communicating Innovations and Sustainability	<p>How to reframe workplace shifts towards sustainability</p> <p>How to get team members on-board with disruptive changes</p> <p>Which cognitive biases are the most prevalent and how have they been challenged effectively</p>	<p>How did 'your company' communicate these changes/initiatives to get team members on board?</p> <p>How was the case for sustainability framed to support the changes that <i>your company</i> hoped to make?</p> <p>What lessons can you share about easing employees into these transitions?</p> <p>How do you usually go about communicating the importance and relevance of sustainability to those around you?</p> <p>Can you share a few of the tactics that you use to communicate the sustainability story?</p>

Analytical Memos

Research Limitations

Impact of Video Recording on Responses

- + Impact of status/profile of interviewees on responses

The opportunity to garner insights from the highest levels of corporate leadership was a privilege. In order to optimize the value of this opportunity, I felt it valuable to gather visual content that would be both accessible and engaging pieces for distribution to the greater online community. However, the video recording may have had an impact on the frankness of responses from interviewees.

- I noticed a clear shift in vocal tone, posture and overall energy of interviewees once the cameras were turned on.
- Some of the interviewees became stiffer and began speaking in softer, lower voices while others became more animated, as if delivering a speech to a crowd
- Some, notably those with a secure place within the organization as a CEO with a longstanding term, did not change much at all, if only to adjust their language slightly; omitting foul and/or colloquial language

As representatives of their respective organizations, it is understandable that an interviewee would want to deliver responses that are reflective of the corporation's public messaging and may feel pressure to perform whilst being recorded. I do not believe, however, that the responses would have differed had the interviews been recorded solely through audio or handwritten notes, simply because any messaging that a corporate leader sends out into the world must be succinctly consistent with that of the corporation they represent.

- When interviewing Daniel Jurijew, the Vice-President, Regulatory & Environmental Policy at Capital Power in Alberta (an interview during which we were denied video access) he maintained many of these same tells
- Was quite nervous to be speaking on behalf of the organization at all.
- Did not approve video recording.
- Did not approve the release of audio recordings.
- Only noted he may approve select quotes if they were sent to him in advance and could be run through the media and legal department.
- He had an assistant come and record the interview for his records, should anything appear to be misrepresented in my research down the line. He made efforts to quote from some of Brian Vaasjo's recent speeches when asked follow-up questions about his personal thoughts.

Reputation and professionalism

CEOs willingness to 'stick to the script'

I understand that interviewees who were interested in participating did so primarily to bolster marketing around their sustainability initiatives. This means:

- Their answers were carefully crafted, at times with support from media and communications teams.
- At times, a second person had to be in the room to witness the

Notes on Social Variables

Gendered Nature of Corporate Roles

The struggle to find female CEOs

It was most important to me to collect responses from both men and women working towards sustainability in Canadian organizations. While I managed to create a 50/50 split of female/male interviewees, none of the female participants held the position of CEO or a similar post.

- I also noticed that women were far more inclined to speak to the power of environmental initiatives on employees' engagement in the workplace
- It can be noted that the women were quick to share the organization's story, vision and mission as it relates to sustainability while the men who did note the journey needed some direct prompting.
-

Dominance of White Corporate Leaders

What does it mean to be a person of colour in a low-carbon world?

Preliminary research re: interview candidates has left me with very little potential for representation among Canadian CEOs. After much research, I found that there are very few people of colour working in sustainability at all. Where are the people of colour?

Age = Experience = Capacity?

How does age influence perspectives on innovation and disruptive change?

- My initial hunch was that older CEOs may be less willing to take on new changes; stuck in a status-quo mentality after years of tradition, but it appears that it was in fact the reverse. Among the corporate interviewees it appears that the longer they have been in the field, the more comfortable they are innovating; their reputation risk within companies has lowered, they are looking forward to retirement.
- They want to leave a legacy behind them and see that the direction of travel is towards bold, innovative solutions. It's also noted as the way to stay competitive in a tightening market space.
- Shifting mindsets towards sustainable innovations + disruptive solutions starts with dialogue and these older CEOs were ready to promote innovation.

Cognitive Biases

Interviewees Understanding of Environmental Psychology

I understood that the majority of interviewees may not be familiar with the concept of environmental psychology or cognitive biases so asking them directly to identify them within the workplace would not produce informative results.

- Only 3/10 interviewees noted the importance of 'reframing' the sustainability story to mitigate cognitive biases. All three were women.
- However, each could speak to their own strategies for communicating climate change to others within their industry. By asking them about these strategies and common challenges that they faced, I was able to pinpoint common cognitive biases that present themselves through audience push-back

Combatting Interviewee Biases

- Volition biases: not feeling capable of embedding sustainability fully, feeling it impractical to implement widespread, disruptive changes
- John Bianchini immediately not wanting to be in the same media release as McKenna

Notes on how change seems to happen

Middle-Up Influence

Bansal (2003) notes how, bombarded by numerous issues and facing managerial and resource constraints, organizations make use of middle-level executive insights to act on issues such as environmental change.

- One stream of thought is that those at other levels of management convince top management to place some issues on the agenda. "The seller, the process and the context all influence organizational responses" says Bansal
- Only 3/10 interviewees noted the importance of 'reframing' the sustainability story to mitigate cognitive biases. All three were women.
- Lynda Kuhn has engaged in this process as the seller over her 15-year career. She explained in her interview how she was strategic in communicating the sustainability story to upper management, how she broke it down piece by piece, over a multi-year journey, to make it relevant to decision-makers
-

Frances Edmonds' work also seems to follow this same pattern

- Frances Edmonds "*The management team very much understands, because I've shown them the data...*"

Bibliography

- Bertels, Stephanie. *Embedding Sustainability in Organizational Culture A How-to Guide for Executives*. Network for Business Sustainability, Richard Ivey School of Business, 2010.
- Brickley, James, Jerold Zimmerman and Clifford Smith. *Designing Organizations to Create Value: from Strategy to Structure*. McGraw-Hill, 2003.
- Brown, John Seely. *Research that reinvents the corporation*. Harvard Business Review. 80(18) pp. 105–115. 2002.
- Burnes, B. *Managing Change: A Strategic Approach to Organizational Dynamics*. Financial Times Prentice Hall, 2000.
- Chemers, Martin M. *Leadership Theory and Research: Perspectives and Directions*. San Diego, CA: Acad. Press, 2000.
- CBC News. *How Maple Leaf Foods is handling the Listeria outbreak*. (2008) <https://www.cbc.ca/news/business/how-maple-leaf-foods-is-handling-the-listeria-outbreak-1.763404>
- Cervone, Daniel, and Philip K. Peake. *Anchoring, Efficacy, and Action: The Influence of Judgmental Heuristics on Self-Efficacy Judgments and Behavior*. Journal of Personality and Social Psychology, 50(3) pp 492-501. 1986. doi:10.1037//0022-3514.50.3.492.
- Channell, Jason, et al. *Energy Darwinism II: Why a Low Carbon Future Doesn't Have to Cost the Earth*. Citibank, 2015.
- Chopp, Steve and John Paglia. *Build a Culture of Value Creation*. Graziadio Business Review, 5(1), 2002.
- Christensen Clayton M., Rory McDonald and Elizabeth J. Altman. *Disruptive Innovation: An Intellectual History and Directions for Future Research*. Journal of Management Studies. 2018. <https://doi.org/10.1111/joms.12349>
- CIFA- Government of Canada, Canadian Food Inspection Agency. *Maple Leaf brand Chicken Breast Strips recalled due to a toxin produced by Staphylococcus bacteria*. (2017)
- Collins, J, and J Porras. *Built to Last: Successful Habits of Visionary Companies*. Harper Business, 2001.
- Community Tool Box. *Section 5. Reframing the Issue*. 2019.
- COTA, Canadian Organic Trade Association. *The Canadian Organic Market Report (Rep.) 2017*.

- FitzGibbon, John, and Kenneth O. Mensah. *Climate Change as a Wicked Problem: An Evaluation of the Institutional Context for Rural Water Management in Ghana*. SAGE Open, 2012. doi:10.1177/2158244012448487.
- Friedman, Milton. *The Social Responsibility of Business Is to Increase Its Profits*. The New York Times Magazine, September 17, 1970, 173-78. doi:10.1007/978-3-540-70818-6_14.
- Frith, Chris. *The Psychology of Volition*. *Experimental Brain Research*. 229(3) pp. 289-99, 2013. doi:10.1007/s00221-013-3407-6.
- Garfinkel, H. *Studies in Ethnomethodology*. Englewood Cliffs, NJ: Prentice-Hall. 1967.
- Gilovich, Thomas, et al. *Heuristics and Biases: The Psychology of Intuitive Judgement*. Cambridge University Press, 2009.
- Government of Alberta. *Environment*. 2019. <https://www.alberta.ca/environment-natural-resources.aspx>
- Hatch. *2017 Sustainability Report: Towards a New Era of Positive Change*. Hatch. 2018. <https://www.hatch.com/en/About-Us/Publications/Sustainability-Report>
- Harrison, Helena; Birks, Melanie; Franklin, Richard & Mills, Jane. *Case Study Research: Foundations and Methodological Orientations*, Forum Qualitative Social Research, 18(1), Art. 19. 2017. <http://nbn-resolving.de/urn:nbn:de:0114-fqs1701195>.
- Haws, Kelly L. and Joseph P. Redden. *In Control of Variety: High Self-Control Reduces the Effect of Food Variety*, *Appetite*, 69(1), 196-203 2013.
- Hoffman, Andrew J., and Max H. Bazerman. *Changing Practice on Sustainability: Understanding and Overcoming the Organizational and Psychological Barriers to Action*. *Organizations and the Sustainability Mosaic: Crafting Long-Term Ecological and Societal Solutions*, Jan. 2007. doi:10.4337/9781847205544.00012.
- Hop Compost. *About Us*. Hop Compost. 2019. <http://www.hopcompost.com/services.html>.
- HP. *2017 Sustainable Impact Report*. HP. 2018. <http://www8.hp.com/h20195/v2/GetPDF.aspx/c05968415.pdf>
- Hunting, Sally Ann., and Daniella Tilbury. *Shifting towards Sustainability: Six Insights into Successful Organisation Change for Sustainability*. Australian Research Institute in Education for Sustainability (ARIES) for the Australian Government Department of the Environment and Heritage, 2006.
- Incropera, Frank P. *Climate Change: A Wicked Problem: Complexity and Uncertainty at the Intersection of Science, Economics, Politics, and Human Behavior*. Cambridge University Press. 2013.

- Ind, Nicholas. *Inside out: How Employees Build Value*. *Journal of Brand Management*, vol. 10, no. 6, Aug. 2003, pp. 393–402., doi:10.1057/palgrave.bm.2540136.
- Jacowitz, Karen E., and Daniel Kahneman. *Measures of Anchoring in Estimation Tasks*. *Personality and Social Psychology Bulletin*, vol. 21, 11(1). pp. 1161–1166. 1995. SAGE Publications, doi:10.1037/e722982011-058.
- Kurucz, Elizabeth C., Barry A. Colbert, and David Wheeler. *Reconstructing Value: Leadership Skills for a Sustainable World*. University of Toronto Press, 2013.
- Levin, Kelly, Benjamin Cashore, Steven Bernstein, Graeme Auld. *Overcoming the tragedy of super wicked problems: constraining our future selves to ameliorate global climate change*. *Policy Sciences*. 45(2), 125-152. 2012.
- Maak, Thomas., Nicola M. Pless. *Responsible Leadership*. London and New York: Routledge, 2015.
- Maple Leaf. Sustainability Report. 2017.
- Maple Leaf. Sustainability at Maple Leaf Foods: Annual Report. 2018.
- Maple Leaf Foods. *Our History. Who We Are*. 2018. Retrieved from <https://www.mapleleaffoods.com/who-we-are/our-history/>
- Manusetto Ventures. *Corporate Culture - Encyclopedia of Business Terms*. Inc.com, 2018, www.inc.com/encyclopedia/corporate-culture.html.
- Marshall, George. *Don't Even Think about It: Why Our Brains Are Wired to Ignore Climate Change*. Bloomsbury, 2014.
- Mazutis, D., & Eckardt, A. *Sleepwalking into Catastrophe: Cognitive Biases and Corporate Climate Change Inertia*. *California Management Review*, 59(3), 74-108. 2017. doi: 10.1177/0008125617707974
- Merriam, Sharan. *Qualitative Research and Case Study Applications in Education*. 2nd ed., Jossey-Bass Publishers, 1998.
- Merriam, Sharan B. *Qualitative Research: a Guide to Design and Implementation*. 2nd ed., Jossey-Bass, 2009.
- Project Implicit. *Project Implicit*. 2011. <https://implicit.harvard.edu/implicit/aboutus.html>.
- Redden, Joseph P. *Hyperbolic Discounting*. *Encyclopedia of Social Psychology*, ed. Roy F. Baumeister and Kathleen D. Vohs, Thousand Oaks, CA: Sage. 2007
- Senge, Peter M. *The Fifth Discipline Fieldbook: Strategies and Tools for Building a Learning Organization*. New York: Currency, Doubleday, 1994. Print.

- Shell. *Shell Sustainability Report 2018*. Shell. 2019. <https://reports.shell.com/sustainability-report/2018/>
- Sopher, Barry, and Arnav Sheth. *A Deeper Look at Hyperbolic Discounting*. *Theory and Decision*, vol. 60, no. 2-3, 2006, pp. 219–255., doi:10.1007/s11238-005-4596-7.
- Spence, Alexa, et al. *The Psychological Distance of Climate Change*. *Risk Analysis*, vol. 32, no. 6, 2012, pp. 957–972., doi:10.1111/j.1539-6924.2011.01695.x.
- Stout, Lynn A. *The Shareholder Value Myth: How Putting Shareholders First Harms Investors, Corporations, and the Public*. San Francisco: Berrett-Koehler, 2012.
- Sustainalytics. *Maple Leaf Foods ESG Analysis*. 2018. https://globalaccess.sustainalytics.com/#/research/company/Maple_Leaf_Foods_Inc__1671cbe6-0750-471a-b962-42b816e9dcd1/overview
- Schumpeter, Joseph. *Capitalism, Socialism and Democracy*. New York: Harper, 1975. [orig. pub. 1942], pp. 82-85.
- Tversky, Amos, and Daniel Kahneman. *The Framing of Decisions and the Psychology of Choice*. *American Association for the Advancement of Science*, vol. 211, no. 4481, 30 Jan. 1981, pp. 453–458., doi:10.1007/978-3-642-70634-9_6.
- Weber, Elke U. *Experience-Based and Description-Based Perceptions of Long-Term Risk: Why Global Warming Does Not Scare Us (Yet)*. *Climatic Change*, vol. 77, no. 1-2, 2006, pp. 103–120., doi:10.1007/s10584-006-9060-3.
- Weber, Elke U., and Eric J. Johnson. *Query Theory: Knowing What We Want by Arguing with Ourselves*. *Behavioral and Brain Sciences*, vol. 34, no. 02, 2011, pp. 91–92., doi:10.1017/s0140525x10002797.
- Whelan Tensie and Carly Fink. *The Comprehensive Business Case for Sustainability*. *Harvard Business Review*. 2016. <https://hbr.org/2016/10/the-comprehensive-business-case-for-sustainability>
- Willard, Bob. *The sustainability advantage: seven business case benefits of a triple bottom line*. New Society, 2002.
- Wilson, Mel. *Corporate Sustainability: What Is It and Where Does It Come from?*. *Ivey Business Journal*, 2003.
- Winston, Andrew. *Explaining the Business Case for Sustainability Again ... and Again ... and Again*. *MIT Sloan Management Review*. 2018 <https://sloanreview.mit.edu/article/explaining-the-business-case-for-sustainability-again-and-again-and-again/>

Yazan, B. *Three Approaches to Case Study Methods in Education: Yin, Merriam, and Stake*. *The Qualitative Report*, 20(2), 134-152. 2015. Retrieved from <https://nsuworks.nova.edu/tqr/vol20/iss2/12>

Yin, Robert K. *Case study research: Design and methods*. Los Angeles, CA: Sage. 2014

Zhang, Zhi-Jie, et al. "Anchoring Effects in Duration Estimation." *Acta Psychologica Sinica*, vol. 40, no. 2, 25 Feb. 2008, pp. 160–165., doi:10.3724/sp.j.1041.2008.00160.