

Organizational Ecology and Culture Change as Policy Tools for Attaining Sustainability in Business

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A Major Paper
submitted to the Faculty of Environmental and Urban Change
in partial fulfillment of the requirements for the degree of Master in Environmental Studies
York University, Toronto, Ontario, Canada

July 31, 2021

Abstract

This paper focuses on two process tools that can be used to promote sustainability in organizations, organizational culture change and organizational ecology. These tools offer unique toolsets for companies in creating long-term environmental sustainability. The paper utilizes the Yin Case study method, focusing on the Canadian telecommunications company *Telus Inc* and international food supplier *The Kraft Heinz Company*. This paper primarily uses document and case study analysis.

Culture change has been a successful tool for *Telus Inc* in improving its environmental sustainability and its model could be replicated by other companies to improve their own. Organizational ecology may be difficult to employ but Eric Trist's version offers a complementary model to the social purpose business model. Future research is needed to determine how this version of organizational ecology could specifically be used to improve a company's environmental sustainability. Both tools have potential to give companies adaptable and formidable methods of increasing internal and external environmental sustainability within their organizations. In addition, if utilized fully, these processes would improve the overall competitiveness of these organizations as seen with *Telus Inc* and its decade long culture initiative.

Foreword

This paper is the culmination of Ciaran Kelly's MES program. This major paper encapsulates the learnings from both the York MES program as well as the Schulich Business diploma. The two organizational tools in this paper are specifically designed to work within private industry to increase the environmental sustainability of those organizations. This paper was used as a learning strategy to marry the environmental policy side of the MES degree with the sustainable business side of the Schulich diploma.

This major paper synthesized the policy and sustainable business areas of concentration from the proposed plan of study. Being able to specifically focus on two policy tools in great depth and test them in the real-world context of two major corporations was pivotal in Ciaran's understanding of the field of study. This paper also utilized the research skills learned and honed through the first three terms of the MES program. Lastly, organizational ecology and organizational culture change were the focus of an IDS and this paper allowed for an expansion on that learning.

Acknowledgements

While this paper will not be published, I would like to acknowledge the faculty of the MES and Schulich programs who made this Master's degree so enjoyable. As someone returning to school after working for years, it was great to be surrounded with passionate professionals who helped guide me, especially through the COVID-19 pandemic. Specifically, I would like to thank Dr. Roderick MacRae for being an amazing advisor/supervisor. He was incredibly helpful at every stage of this process and I already miss our group meetings in his office prior to the pandemic. I would like to thank Dr. Peter Timmerman for his guidance through the joint business diploma. I would like to thank r. Mark Winfield for helping me realize that policy was a passion for me, something that I did not know prior to joining the program. I would like to thank all of my professors from both faculties as I only had great class experiences and I will cherish them for the rest of my career. Lastly, I would like the thank all of the faculty of OSAS for keeping the boat upright and guiding me through the program/pandemic. Thank you all for your dedication and hard work.

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1. Introduction

The natural environment has always been central to Canadian identity. The nation's economy, industries, policies and culture have been shaped by the nature that it exists in. However the sustainability of Canadian socio-economic systems is in question, in part because of the way many organizations behave. This paper will research and evaluate current and potential organizational operations, management and governance tools to help organizations, both public and private, implement internal sustainability measures. Governments and companies are often thought about completely differently because they have fundamentally different agendas. Some of the same tools can be applied to both and the two can learn from one another. While capitalism is pervasive in Western society and is synonymous with democracy, it cannot continue as it exists today if global challenges like climate change are to be addressed (Trist, 1989). Government and private organizations need to fundamentally shift to incorporate the environment in their core values if we are to live in a sustainable society. The onus of environmental protection cannot solely lie with everyday citizens.

Over the last two decades, Canada has seen sweeping negative changes to environmental protections such as altering the *Navigable Waters Act* or the withdrawal from the Kyoto Protocol. Even after a change in government leadership in 2015, Canada has approved pipelines and done little to curb its greenhouse gas emissions. Why is environmental change so hard? The largest political parties, despite fundamental ideological differences, do not seem to pursue environmental protections. The answer is likely that pushing an environmental agenda is not critical to winning an election and re-election has traditionally been the most fundamental metric governments consider. Without significant organizational change, the environment will take a back seat in government, though it often receives lip service.

The same can be said for private companies within Canada. While there are notable exceptions, Unilever being a significant one (Gardner, 2012), companies have not led the charge on mitigating climate change. Companies have only recently started to look at sustainability through corporate social responsibility (CSR) or environmental, social and governance programs (ESG). Even then it is more likely that companies only do so if required by legislative and regulatory interventions. Companies, like governments, have only one primary function. Where governments exist to get re-elected, companies exist to make money.

This paper will look at the tools for organization and culture change. It will evaluate the structures and processes that make up an organization and will argue for organizations to more thoroughly use processes such as culture change or organizational ecology. These tools all have implications for environmental sustainability and this paper will attempt to illuminate how they can be used to create new environmental strategies for organizations of all sizes.

2. Methodology

This research primarily uses document and case study analysis.

Yin Case Study Method

To determine whether my selected organizational tools and structures would prove to be successful in the real world, it is imperative to examine them with case studies. The term case study takes on different meanings depending on the academic field in question. A case study in business is different than a case study in sociology. For the purposes of this research project, I will be using Yin's twofold definition of a case study:

“A case study is an empirical method that investigates a contemporary phenomenon (case) in depth and within its real-world context, especially when the boundaries between the phenomenon and context may not be clearly evident. A case study copes with the technically distinctive situation in which there will be many more variables of interest than data points and as one result benefits from the prior development of theoretical propositions to guide design, data collection, analysis and as another result. [A case study] relies on multiple sources of evidence, with data needing to converge in a triangulating fashion.” (Yin, 2018).

Using this definition, it becomes clear that the purpose of a case study is to understand a real-world example and with that understanding gain important context that supports a hypothesis. For this project that would mean that the cases would help assess the thesis that organizations would benefit from the different tools that are being presented.

My paper will also use a style that Yin calls a Cross Case Analysis. This involves multiple case studies and using them to find a single set of conclusions. This is necessary for my project since I am evaluating several different types of tools and they each might not be applicable to each of the cases.

Different research methods tackle different research questions. Case studies tackle how and why. Both of these are critical to my research. I am asking how these organizational structures can be utilized and why they are or are not implemented or effective. Yin encourages having a secondary research method to address any other questions that may be pertinent.

One of the most important aspects of a research study is its design. There are five components of research designs in Yin’s case study model;

1. “A case studies questions;
2. Its propositions, if any;
3. Its cases;
4. The logic linking the data to the propositions; and
5. The criteria for interpreting the findings” (Yin 2018, pg. 27)

The research question for this paper has already been outlined: how can the structure, processes and culture of an organization be utilized to create internal and external environmental sustainability? As a how question, a case study approach is appropriate as it covers both why and how questions.

The proposition of this paper is that organizational culture change, organizational ecology and ESG (environmental social governance) can be used to alter the structures, processes and culture for an organization to help them achieve sustainability.

In Yin’s framework, cases that are selected have to contain two key components. The first is that the case has to be defined. In this research essay, the defined cases are two specific organizations, Telus Inc and The Kraft Heinz Company. By examining individual organizations as opposed to the entire sector (i.e. government, private sector or non-profit), they can be assessed against comparators in that larger sector. This will allow insight into how impactful the studied processes could be.

The second component is that the cases need to be “bounded.” This means that both cases need to be linked in some way with what they are being compared to so that conclusions can be drawn. Each of the selected cases for this paper are “bounded” to organizational culture change, organizational ecology and ESG in different ways.

Case Selection

Yin's case study methodology lays out four basic types of case study designs. There are two "holistic" designs and two "embedded" designs. For each type, one is a single-case design and the other is a multiple-case design. The holistic designs view the case(s) using a single unity of analysis. You are evaluating the case within the context of your study. For embedded designs you are using multiple units of analysis. For this paper, an embedded approach is more applicable because each case must answer the question of how organizational ecology, organizational culture change and environmental process changes could (or did) affect each case. Each of these can exist without another so it is important that they can be evaluated separately.

The first case selected for review for this paper is the Canadian telecommunications company *Telus Communications Inc.* Telus is well known for having a positive culture by its employees and has postured itself as an environmental leader within the Canadian telecommunications space. Telus is a good company to review for the benefits and costs of culture change. How did they develop a good culture? Do they believe it was worth it? Does it provide strategic benefit or is it "just cause" business? In addition, it will be valuable to determine what the depth of their environmental program is and why it was created in the first place, especially as Telus is embarking on environmental programs that the other telecommunication companies are not (Willis, 2021).

The second case selected for review is The Kraft Heinz Company, an American food producer most famously known for its ketchup and processed food. The company is the third largest food producer in North America and the fifth largest on the planet. Kraft and Heinz

merged in 2015 and since then have had a colossal collapse in market value (Horn, 2017). Each of Kraft and Heinz would have had an individual company culture prior to the merger. What does the culture look like now? Is it a hinderance or a benefit? Was there a strategy of which culture to adopt or to create a new one? Employee exit interviews suggest a toxic work environment, so is there an opportunity for success with organizational culture change (Anwar, 2019)? As far as organizational ecology is concerned, the food and beverage sector are incredibly competitive. Is the company too big to fail, rendering organizational ecology a meaningless tool or can it be used to predict weak points and opportunities? Lastly, The Kraft Heinz Company as a processed food manufacturer has a large environmental footprint. What benefit or detriment could environmental process changes have for this company?

Document Selection

One of the advantages of case study analysis under Yin's framework is that it favours the use of historical document analysis (Yin, 1984). This means reviewing past documents to make conclusions about the cases. The word historical can mean anything in the past, not just the distant one. This paper will utilize a document review type approach using documents from the past decade to assure currency and relevance. Document analysis allows for the identification of patterns over many sources. This will create a sound foundation for analysis of the tools being analyzed for this paper.

Documents that describe the tools being analyzed will be older as both organizational ecology and culture change have been discussed in academia for decades. This will allow for an analysis on how those frameworks have evolved over the years.

There will primarily be two types of documents that are analyzed, academic and business papers. Where possible academic articles will be examined to explore the theories presented in the paper. . Business and newspaper articles can be more current due to not needing as in-depth peer-review process. There will also be more business articles about Telus and Kraft Heinz than academic ones due to both companies being prominent in their industries.

Academic articles will be found using keyword searches (Sustainability, company culture, Telus Inc, The Kraft Heinz Company, organizational ecology etc.) on academic article databases. Any books that are used in this paper will also be found through the university library as a starting point to ensure that they are reputable.

Where possible any data from a business article will have several sources to substantiate them. Business articles from trusted sources, such as prominent magazines or newspapers, will be preferred to ensure data quality (Reuters, Forbes, The Globe and Mail, Toronto Star, Financial Post, New York Times etc.).

As articles were analyzed, I searched for patterns that emerged. Several systems were used to track these patterns. First, preliminary patterns were colour coded for which process they pertained to, from organizational ecology to culture change to general environmental sustainability. From there the articles were stored in digital folders by their colour code. In the case a paper had multiple codes, I chose the one that I felt was most appropriate for ease of access. Each file was saved to denote the author and type of document it was. This helped to ensure that each document was easily accessible and citable for reference in the paper. All

documents that were used in this paper were cited in the paper and any other papers that were not directly quoted can be found in the additional documents reviewed appendix

Evaluative Framework and Criteria

Both Telus Inc and The Kraft Heinz Company have existing organizational cultures and environmental programs. As some of the leaders in their industry, they are expected by both their shareholders and their customers to follow the broader social demands for change, which includes a recent emphasis on climate change. To determine whether or not organizational ecology and culture change could be valuable to these companies, the effectiveness of their current programs and policies must be evaluated. To do this an evaluation framework must be used to determine the scale of efficacy that these policies correctly possess. This paper utilized a policy analysis impact evaluation framework.

Impact evaluation focuses on the effectiveness of a policy's outcomes (Hessing et al, 2005). Specifically impact evaluation looks at whether a policy achieved its intended outcomes. For example, if a company's environmental policy was aimed at reducing emissions by an amount by a certain date, this framework would first look at if it achieved its goals. If it did not, the framework is used to evaluate why the policy did not have the intended impact. If it did work then the framework can be used to develop tighter and more impactful policies to amplify impact.

The criteria that the framework uses to measure the impacts of any given policy in this paper are effectiveness and policy resilience (VanNijnatten, 2016). The effectiveness of any given environmental policy is crucially important but so is the resilience of any given policy.

This paper posits that organizational ecology and culture change can be used to increase policy resilience within a given organization. Evaluating the current policy resilience is critical to determining whether or not these tools would be particularly useful for Telus or Kraft Heinz.

The impact evaluation framework as well as the effectiveness and resilience criteria were applied to all of the documents reviewed through the research phase of this paper. This was the lens that all documents were reviewed through to ensure consistency.

In conclusion, the methodology of the paper is as follows. This paper utilized a Yin case study approach to selecting and evaluating case studies. The paper was a document analysis consisting of both academic sources as well as business sources which were thoroughly vetted. Patterns were identified, colour coded and organized by theme to ensure that they were consistent to the paper's themes. The documents were examined using an impact evaluation framework with a policy effectiveness and resilience lens. Each of the tools examined in this paper has its own section and compare to both of the selected case studies as directed by Yin's case study method. There is then an analysis and conclusion section that round all of the findings together.

3. Organizational Ecology

Organizational ecology is a theory that explores how organizations are structured and see success, developed in the 1970s by Hannan and Freeman (Freeman and Hannan, 1977, 1989). The theory differs from traditional organizational theory because it suggests that the environment in which an organization finds itself is as, if not more important, than the leadership of that company. We have a culture that obsesses over leaders of companies, from Steve Jobs and Bill

Gates to Elon Musk and Jeff Bezos. This theory, however, suggests that the success of these companies had as much to do with the markets they were entering and how they adapted to changing stimuli. This theory could be a useful tool for environmentalists because it could be used to help convince companies to shift environmentally before they are required to, better positioning them compared to their competitors.

Hannan and Freeman viewed organizational ecology as a social science that used lessons from biology, economics and sociology to answer questions on how an organization is structured and how they can be successful (Astley & Fombrun, 1983). The idea that an organization could have an ecology, let alone one that mirrored biological and sociological ones was a revolutionary idea.

Their theory broke organizational ecology into three distinct levels: communities, populations and organizations. The population level examines the populations that make up organizations and how that makeup affects that organization. The community level examines how intersecting populations interact with each other and how those interactions can impact an organization. The organization level examines individual organizations and the choices that determine their successes and failures within their environment (Hannan & Freeman, 1989). The organization and community levels of this theory are the ones most pertinent to making companies and governments more sustainable.

Community:

In the context of making companies and governments more sustainable, the community level would examine how the makeup of our community shapes the success of the environment in which that organization exists. For example, the government of Toronto would be greatly

impacted by the different residents in the city of Toronto. The way those residents interact, what they look for in a government and how they vote would greatly determine the makeup and success of any given government. The community would dramatically change when you look at the Government of Ontario however. The City of Toronto would be included in the populations making up Ontario but so would smaller communities and other cities. This would suggest that understanding the way populations interact would be extremely complicated, and it is. It is also something that, if understood better would allow governments to actually address what populations want, and also anticipate what they need even if they don't want it.

This type of research is already being done for governments, albeit not under the lens of organizational ecology. Polling and the media play a large role in doing this research on the government's behalf, though it is not always successful. A recent example would be the Government of Ontario's back to school plan in response to the Coronavirus Pandemic in the fall of 2020. Thousands of parents signed protests and went to the media with their concerns (Neustaeter, 2020). There was a clear disconnect between what the government thought the people would accept and the reality. Another disconnect would be the importance of environmental sustainability. In the 2018 Ontario election the environment was a top ten issue for voters (Shah, 2019). It stayed a top issue in the 2019 federal election, of which Ontario has more voters than any other province (Shah, 2019). Despite the environment being a core issue, the Conservatives under Doug Ford have eliminated the position of environmental commissioner, deregulated environmental protections and made no substantial headway to reduce Ontario's carbon footprint. Understanding what the population truly wants and needs is a monumental task and one that is hard to tangibly grasp. One of the ways to attempt to make this

undertaking more manageable would be adopting approaches like organizational ecology to help piece in things that the government might be missing.

The community level for businesses has similarities to its government counterpart but also some crucial differences. The first difference is that companies have vastly different populations to manage. A local butcher only has to worry about one community whereas Canadian Tire has to examine the whole country. Companies are also significantly less cyclical. Where a government has to worry about re-election every 2-4 years, companies' worries are less fixed. Profitability is important and depending on the company can be seasonal, but the timeframes are never as fixed as election dates. This is both a strength and a weakness. On the upside, a company can be much more manoeuvrable and exploratory in how they approach the problems of their communities. They can experiment and make changes at a faster rate. The downside, however, is that profit is always a concern. Where a government can take a sigh of relief the day after an election, a company never gets a break.

The benefit of utilizing organizational ecology for business can have an even bigger impact than that of a government. Understanding communities can give a company a competitive advantage. In fact, a form of organizational ecology is already widely utilized, advertisements. In addition to understanding how to brand items or structure sales, companies should be using the community level of organizational ecology to understand social issues, including that of sustainability. As discussed earlier, environmental sustainability is on the minds of Torontonians, Ontarians and Canadians. Looking at a community-by-community basis, companies could be structuring themselves to be more sustainable to attract more customers and to employ motivated young people who want their companies to be more than profitable. Companies in Canada are already investing more in Corporate Social Responsibility (CSR) programs and Environment,

Social, Governance programs because it is almost a requirement to operate today (Crutchfield & Asghar, 2020). This would be an extension of that, just more targeted.

Populations:

Of the three levels' of Hannan and Freeman's theory, populations are the least valuable for companies and specifically the companies that are being reviewed in this paper. The populations level of organizational ecology is interested in how different populations make up different organizations similar to how they would in a natural ecosystem. This analyzes what populations make up any given company and what the needs of that group are. It can be a very useful tool, increasingly so as there is a push for visible minority and gender equality in organizations. In the context of environmental sustainability however, the way organizations and communities interact with each other is more pertinent to creating a system for environmental policy.

Organizations:

The organizations level of Hannan and Freeman's theory examines the individual organization and how their choices impact their success in their environment (Hannan & Freeman, 1989). Environment in this context is the space in which they operate. For governments that would be their jurisdictions and for companies it would be the market they operate in. Internal policy decisions, hiring practices, culture etc. all play a role in how well an organization can exist in its environment. For governments this is most often policy decisions and internal culture. When a government makes a policy decision it impacts the success of said government. Going back to the Ontario government example, in 2019 the Ford government made policy decisions that upset Ontario teachers. This policy stance led to several strikes and resulted

in a popularity dip for the provincial government (D'Mello, 2020). If the government had utilized the community level of organizational ecology it could have avoided much of the blow back and arrived at a policy cut that the teachers and population could have swallowed, a result that the government stumbled into anyway almost a year later (D'Mello, 2020).

Not only do governmental policies play a role but also internal culture. When the culture of an organization becomes all about cutting and saving, motivation decreases. The people working for the government have to tow the line and creativity is stifled to align with whatever political party is in power even if said worker is a lifelong bureaucrat that has seen many government changes. While this may seem necessary, organizational ecology concepts would suggest that it is not. Using organizational ecology, the government could create a place of innovation which would attract more talent to said government that could outlast the political party in question. This would not be beneficial to one party but all government. The result could be more innovative solutions to problems such as housing, the economy and the environment. Using the organization level of Hannan and Freeman's organizational ecology could inform what types of organizational decisions work and which ones do not, something that our current governmental structures do not apply.

For private companies, the organization level of Hannan and Freeman's theory is deeply applicable in many of the same ways as for governments. Policy decisions, hiring practices and internal culture all impact the successes of companies. Most of the largest and most successful companies on the planet are already starting to make positive changes in these areas through CSR programs. Organizational ecology explains why companies feel as though CSR is important to the success of a company in its environment. Many modern economists and environmentalists would argue that not all CSR is created equal. However, for CSR to be successful and create a

sustainable competitive advantage, that CSR must be strategic and integral to the business model (Browne, 2013). Companies should spend more time trying to figure out how to make the CSR that they are undergoing strategic, and if strategic CSR is not possible, how to reorganize the business model so that the company can have CSR that is vital to the business. This is not only the current theory around CSR, but also indirectly utilizes the organization level of Hannan and Freeman's theory.

Hannan and Freeman penned the first idea of organizational ecology, but it did not end with them. Another leader in the field of organizational ecology was Eric Trist whose interpretation differed significantly. His version of organizational ecology is even more pertinent to environmental sustainability than Hannan and Freeman, whose theory was originally designed just to examine organizational mortality (Trist, 1983).

Eric Trist:

The initial theory of organizational ecology penned by Hannan and Freeman views the environment around an organization as the most important factor of success. This environment is dictated by the actions of the levels discussed in the last section. While this theory was widely accepted by the experts, there were others that thought this type of thinking was restrictive. Eric Trist for one thought that by arguing that the environment was the most important factor it reduced the importance of proactive choice. If the environment was going to determine your success anyways why fight the current?

Eric Trist's theory of organizational ecology differs from previous versions because it leans further into social ecology (Trist, 1983). Trist believed that success in organizations came from "proactive communal arrangements" between them (Trist, 1989). This theory suggests that

through creating connective bonds between organizations, it would be easier to thrive in the environments that an organization found itself in. Trist approached organizational ecology from a lens of how it could be beneficial to society as opposed to previous authors who were more interested in organizational success. Trist wanted companies to be part of positive social change. His views are strikingly similar to CSR theorists decades later.

Trist argued that companies could be successful at dealing with mundane problems of their environment but would struggle to tackle what he called “meta problems” (Trist, 1983). Meta problems are issues that are too vast or complex for any one organization to handle. Modern day examples of meta problems would be climate change or COVID-19, issues that no single entity could handle but were in the best interest of all to solve. It is not a controversial statement to argue that coronavirus is not a profitable issue for the vast majority of companies in the world. The pandemic even saw Disney post its first quarterly loss since 2001, something that did not even happen in the Great Recession of 2008. The effects of a phenomenon like climate change could have even greater impacts (Gates, 2020). Companies and governments could utilize Trist’s theory of “proactive communal arrangements” to find themselves in a better position to tackle these meta problems as they arise.

Trist’s organizational ecology is something that most successful governments in Canada are already accustomed to. Even before the federal, provincial and municipal governments had to work together to tackle coronavirus, many large successes have been brought to the Canadian population through government levels working together (though usually with contestation), from socialized healthcare to climate change mitigation strategies (Taber, 2015). It is typically more noticeable when governments don’t work together, exemplified by Alberta Premier Jason Kenney fighting Prime Minister Trudeau over the Carbon Tax or Premier Kathleen Wynne

nixing Mayor John Tory's toll roads. Governments not working together is uncomfortable and largely unsuccessful for both parties. From Trist's work, they should continue to collaborate even if diametrically opposed in ideology because it is ultimately in the public's best interest. Finding a way to make sure that happens from government to government may be a tall order.

One type of "proactive communal arrangement" that governments could pursue would be with corporations. These arrangements could be very positive at dealing with issues such as climate change. A Canadian example of this could include transit agreements such as Metrolinx (Beattie, 2021). This type of arrangement, similar to transit deals with Metrolinx, can allow the government to take faster action than they could normally (like the Hamilton transit investment in 2021 (Beattie, 2021)). More specifically to sustainability, governments and companies could set boundaries before they need to be set into law, with incentives instead of tax punishments. This form of environmental economics could help companies make sustainable transitions proactively which would be better for climate mitigation.

There is a large risk with this type of relationship however. Companies should never have such a relationship with governments that would allow them to have sway over public office, which is a sad reality of current politics. It is not hard to imagine "proactive communal arrangements" devolving into lobbying for lax rules. Perhaps the best way for Trist's theory to be applied to the relationship of company and government would be for it to be one sided. The government sets the limits using environmental economics and companies accept them with the understanding that this relationship will allow them to tackle the meta challenge that is climate change. These sorts of arrangements are currently already in discussion after the most recent climate summit. The newly elected Biden administration has stated their intention to work with companies to improve the countries sustainability (The Federal Government of the United States

of America, 2021). If the largest economy in the world is beginning to discuss sustainability, it is a good time for companies to start to think about how they can work within that environment to be successful.

Companies on the other hand have much to take away from Trist's environmental economics. Intercompany relationships have the potential to solve some truly meta problems from poverty to climate change (Bernard, 1999). Solving these problems can offer an alternative to the unlimited growth model that has been prevalent in society for the past century and replace it with more CSR focused approaches, with a company's primary motive being making society a better place.

Intercompany relationships are rare when it comes to social issues or climate change. The relationships that do currently exist are for things like price setting or not flooding the market with too much product. These are relationships that only focus on the bottom-line or profit. Trist's organizational ecology would have companies expand these relationships.

Climate change does not only threaten the planet and society. It also threatens the economic sustainability of companies (Gates, 2020). Mitigating its negative effects and preventing as much of its damaging effects as possible is only something that can be done through collaboration. This idea is not as radical as it sounds. Trist's theory can be applied to all sorts of social issues, like gender inequality or racism in addition to climate change.

Organizational Culture Change

On December 3, 1984 a disaster would occur that would shape companies and governments around the world forever. On that tragic day in Bhopal (India), over forty tonnes of methyl isocyanate would leak and killed tens of thousands of people in a matter of days (Taylor, 2014). While the lives of the people lost that day could never be replaced or forgotten, important lessons about industrial safety and environmental regulation were discovered. This would be one of the first quantifiable changes in safety culture in companies (Taylor, 2014).

What is company culture? What makes it so integral to the operation of a successful business and why do companies spend millions of dollars with consulting companies to try and “fix” theirs? A general definition of company culture is “a defined set of shared values, goals, attitudes and practices that [make up] an organization” (DuPont Sustainable Systems, n.d.). Culture change can be anything from the beliefs employees hold about company motives to how passionate employees are to work at any given organization. The reason why safety was outlined earlier is that a company’s safety culture is the single most important factor in the safety of an organization. There are lessons to be learned by how effective a safety culture is and these lessons can be applied to helping organizations create strong environmental cultures.

The Bhopal disaster was not the only event that would push the importance of safety in organizations. The United States had been developing safety standards for almost fifteen years by the time the disaster occurred, Canada for almost ten. Both of these would also come out of workplace accidents. The Occupational Safety and Health Act was something that the governments of Canada had to amend and strengthen because the sentiment around the country was that employees should not be injured or killed at work. It was a cultural paradigm shift, one that helped push government to make necessary changes.

There is an important distinction between regulation and culture. Regulation does not necessarily create a culture as often it represents the bare minimum requirements. Organizations that do not have a strong safety culture will often not exceed any given regulation because it is not legally required of them. An organization that has a strong safety culture will move well past any given regulation because it is in the core values of that organization to be on the cutting edge of technology and practices. Regulation often lags until disasters occur or people are hurt. It is an inherently reactive system. Strong safety cultures are instead proactive, about protecting employees *before* they are injured. This example is almost exactly mirrored in the patterns of environmental legislation and culture.

Environmental protections, like safety, follow after damage has already occurred. Traditionally, species are protected once they are already threatened, oil spills are cleaned up not necessarily prevented and climate change is more mitigated than prevented. Even worse, adaptation often gets more consideration than mitigation. Like safety, once damage has been done there is little that can be done for the victims. It is therefore incredibly important to be proactive with protections, both legally and culturally. That is where safety culture comes in. Safety in Canada is not perfect, but according to statistics Canada, it is much stronger than it was even a decade ago. Companies take safety more seriously in part because of regulation but also because it is expected that you will not get hurt at work. Some companies have moved even further into strong safety cultures becoming interdependent, meaning that the workers have direct agency over the safety of their workplaces. There is no reason why the lessons and steps that help safety culture be successful could not be applicable for the environment. The question is not whether it can be done but how?

There are hundreds of different safety culture models that have helped companies become symbols of safety and whose employees are incredibly passionate to work for as a result. For the purposes of this paper one strategy will be examined and applied to environmental culture but the lessons learned here can be applied to any number of other strategies.

That strategy is called the “Bradley Curve” and it was developed in 1994 by DuPont Sustainable solutions (DuPont Sustainable Systems, n.d.). The strategy, named after a team member who helped create it, helps a company gauge where in their safety journey they are. A safety culture is broken up into 4 stages: reactive, dependent, independent and interdependent (DuPont Sustainable Systems, n.d.). The curve shows that as an organization moves from stage to stage, its injury rate should steadily decline.

In the reactive stage, a company only takes action after an incident has happened. This is where safety is based on instinct (DuPont Sustainable Systems, n.d.). This is where most businesses in Canada are when it comes to environmental safety culture. They will only make a change once they are legally obligated to, usually because of an environmental damaging event. The second stage is dependent, a stage that is based on overseers and oversight. This is where appointed people are responsible for safety, usually in the form of a safety manager. In the environmental sphere, this could be when a company acknowledges that they want to be more sustainable and hire an environmental manager. The responsibility for an organization’s environmental track record stays with that employee. It is positive progress but not nearly what is required for true sustainability. As we will discuss later in the culture change analysis section, The Kraft Heinz Company is most likely in the reactive or dependant stage of culture.

The next stage, independent, is based on self-protection. It is the first time when employees become part of a safety solution, not a safety problem (DuPont Sustainable Systems,

n.d.). Employees have responsibility for their own safety. This area does not translate as neatly into environmental culture as an individual's environmental conscience does not necessarily keep an organization sustainable. An environmentally independent organization might instead be one where environmental sustainability is not centralized to one person but to an entire department which works to make a company as environmentally sustainable as possible within its own sphere of influence. This is a stage where companies would start to see real change.

The last stage is the interdependent stage. This stage is based on teamwork and employees are one of the key drivers of safety success in improving safety. Safety is completely in the hands of the employee and they have full agency in making a company safe (DuPont Sustainable Systems, n.d.). What this might look like in environmental culture is a company where every employee is passionate about protecting the planet. In addition, this would be a company that understands that environmentalism needs to be intercompany as well and would work with competitors to move the industry forward. Environmentalism would be part of the core values of an interdependent environmental culture. The question remains, how can an organization go from stage to stage?

When a company wants to improve its safety performance they can turn to the "Bradley Curve" as a tool to strengthen and transform their culture. The process can take years and its ultimately a never-ending goal because to be interdependent is to be continually improving (DuPont Sustainable Systems, n.d.). The first and most important step however is to start with motivated leadership. An organizations leadership will ultimately be the first step in moving through a cultural transformation. They will be the ones that set the initial goal and they will be the ones to put forth the capital to make it happen. This is how it was for safety and it will likely also be this way if ported to the environmental field. The employees of any given organization

can want to be sustainable but hiring environmental internal professionals and starting a cultural transformation is not possible without leadership buy in from the beginning.

There is no road map on how to use tools like the “Bradley Curve” to help the environmental field in the same way that it helped safety. It will take experimentation and it will take leadership. Using proven tools is one way to make that change more quickly. Having a better environmental culture can make employees proud to work for their company and that company can advertise to the world that it is doing more than its part to help the planet that we all share. It would be more than greenwashing and that company would create a long-term competitive advantage. They just have to start somewhere.

4. Analysis

Organizational ecology and culture change are both tools that have not been widely used in the corporate world, especially when it comes to the environment. Culture change has been a part of modern business for over a decade but it has rarely been focused squarely on environmental sustainability, both internally and externally. Organizational ecology on the other hand is still very much a theory, one based in biology and sociology which are infrequently applied to business theory. This section will analyze how these two theories could be applied to Telus Inc and The Kraft Heinz Company. How they can benefit these companies, the challenges associated with implementation and the theoretical successes/failures of these processes will be discussed in each companies’ real-world contexts.

Telus

Telus Corporation provides Canadians with a wide array of telecommunications, from internet to phone services. Telus has 3 main competitors within Canada including Bell Canada, Rogers Communications and Shaw Communications. At the time of writing, Rogers had announced a takeover of Shaw Communications which would reduce Telus' main competitors to two. Telus is an important case study for this paper for a few reasons.

First, it is widely recognized for having a good internal culture, something that this paper argues is important for helping a company become environmental stewards. The company has also developed strong environmental programs in recent years, something that its competitors have not done. While there is little in the way of evidence that this was an intentional understanding of the specifics of organizational ecology, Telus may be reacting to the ecology of both its own organization as well as the environment in which it is existing.

Lastly, those same environmental programs are the result of years of CSR and a transition to an ESG type strategy. The business world has a newfound obsession with ESG and Telus was well suited to the transition because of its long history of CSR.

Telus is also an important case study because it is easy to compare to its competitors. With only two or three competitors, it becomes simpler to define the benefits that organizational culture change, organizational ecology and CSR/ESG have had on the company versus its rivals. It becomes more difficult for companies if there are dozens of competitors to compare with. Luckily for this analysis, neither Rogers nor Bell has put as large an emphasis on culture or sustainability initiatives making them interesting foils for comparison (Ramirez, 2020).

In many ways, Telus can be viewed as a company that has intentionally or unintentionally adopted organizational culture change, organizational ecology and CSR/ESG

strategies for environmental sustainability. Not only have these tools and structural strategies helped the company succeed but continued efforts in these areas could improve the company.

Of the tools evaluated in this paper, organizational culture change is the one that Telus has best incorporated. Unlike, organizational ecology, culture change was intentionally integrated and the company has been rewarded internally and externally for it (Bingham & Galagan, 2012).

As will be discussed in the culture change section, positive culture change is something that must be purposely nurtured and fostered. Many companies put a focus on the experience of its customers but it is much more uncommon for a company to spend time and resources on creating a strong internal culture. Why did Telus focus on culture when its competitors did not? What did company management hope to achieve? Was the emphasis on culture worth it for the company, fiscally or just socially? This company was selected because finding the answers to these questions reveal the strength of organizational culture change and why it can be a key driver in helping organizations have a powerful focus on becoming more environmentally sustainable.

While there will be a deeper analysis into how a positive culture was attained and what the outcomes have been in the culture change chapter, it is important to outline why the company chose this path. In 2012, current CEO and president Darren Entwistle gave an interview about culture and his company's focus on it. At the time, Telus had been recognized six times as a top Canadian employer because of its "progressive learning culture" (Bingham & Galagan, 2012). When asked why he chose to focus on internal culture, Mr. Entwistle responded:

“it comes from a deep-rooted belief that when your peers and competitors are able to emulate your technology, you realize the one thing that is difficult to copy is your culture. That’s something to invest in because you can build a sustainable competitive advantage through your culture that outlasts anything you do at the product or technology level” (Bingham & Galagan, 2012).

The focus on culture change was not some idealistic goal just to make the company better or to be inherently good to employees. It was purposely designed to give the company a competitive advantage. Mr. Entwistle continued:

“Developing culture is a long-term undertaking, but it’s worth it because it really can differentiate you from the competition in a very meaningful way... It wasn’t altruism; it was a hard business philosophy about how to stay ahead of the competition. Culture is very much a living organism because once you create it, feed it, nurture it, challenge, it, it continues to grow. And that allows us to answer the dynamic challenges that arise continually in an industry like telecommunications” (Bingham & Galagan, 2012).

One of the key reasons that this company was chosen as a case was that it has already adopted a culture strategy that may have helped the company become a leader in environmentalism compared to its peers. The environment and the need to become more sustainable may have been one of those “dynamic challenges” that Entwistle spoke of. While it is unlikely that he was specifically speaking to the environment back in 2012, the environment has become a key issue for Canadians in recent years.

It seems like an unlikely coincidence that Telus has announced its most ambitious environmental programs at the same time. Was culture a key part of this focus? Can a positive

culture create a competitive advantage as Entwistle states? In the culture change chapter, Telus will be directly compared to a company that is famous for having a less positive culture.

It is unlikely that Telus has specifically focused on the theory of organizational ecology and if they have, they have not revealed it publicly. While it may be unintentional, Telus has implemented some of the lessons of organizational ecology which has helped them to be successful.

In the organizational ecology section of this paper, Telus will be examined using the framework. How does Telus operate in the Canadian telecommunications environment? What purposeful actions has the company taken to help it thrive in that environment? What could organizational ecology further teach Telus and its position in Canadian society?

Organizational ecology teaches companies how to read the changing tides of the society they exist in and Telus is no exception. Canada is quickly transforming into a country where even the biggest companies are expected to be part of our sustainable future (Shah, 2019). Using organizational ecology can help to inform future CSR and ESG strategies for Telus when it comes to environmental sustainability. They have shown commitment to environmental sustainability so it would be useful to have a dedicated toolset that could be used to show how any given strategy would affect the business itself as well as its competitors.

Kraft Heinz

The Kraft Heinz Company is an American food company that was created from a merger between Kraft Foods and Heinz. The Kraft Heinz Company is the third-largest food company in North America and is in the top five food companies on the planet (Kraft Heinz, n.d.). They also

have eight “brands” that are worth more than one billion dollars (Kraft Heinz, n.d.). The Kraft Heinz Company is an important case for this paper because it is both very different from Telus and it appears would benefit from the strategies presented in this paper.

While Telus is a major company within Canada, it does not have a huge global presence. The Kraft Heinz company is one of the largest food producers in the world which makes it a valuable case study when evaluating organizational ecology and culture change with a global lens as opposed to a Canadian one. The threats of climate change to each of these organizations will also be different due to their global contexts, meaning the outcomes of using organizational ecology and culture change could yield different results.

One of the other key differences between The Kraft Heinz Company and Telus is that while Telus has been recognized for its culture, The Kraft Heinz Company has struggled immensely with its internal culture post-merger (Horn, 2017). This will give the paper two perspectives to examine, one that is considered “good” and one that is considered “bad.” Whether or not these tags will hold true will be examined in the culture change section of the paper.

As one of the largest food companies, The Kraft Heinz company also has an enormous environmental impact. Any environmental platform that could arise from organizational ecology, organizational culture change or ESG would have to have a large scope and could have enormous benefits. The Kraft Heinz Company has also struggled to create effective environmental programs and has actually increased its negative impact since its merger (Querolo, 2020). It also is another point of difference from Telus which just increased its environmental commitments drastically and is internationally recognized for its sustainability efforts (Ramirez, 2020).

The Kraft Heinz Company provides a useful case for study for culture change for several reasons. The first is that Kraft and Heinz were each established companies and together they are a brand new one. This means that the culture of each organization can be examined separately as well as together. This should allow a deeper analysis of how culture can shape an organization.

Kraft Heinz has had issues with its organizational culture (Anwar, 2019). It has struggled to compete since its inception and this has been partially attributed to its internal culture of cost cutting (“A New Broom for Dusty Brands; Kraft Heinz,” 2019).

Poor historic culture, mixing with recent reduced sales suggests a need of cultural reform, especially if it is to create a sustainable brand.

Operating in a much more complex worldwide environment, there are numerous complications, from competitors, regional food preferences to global supply chains. Understanding the environment that the company exists in as well as the companies own internal ecology could do much to help it weather and thrive any drastic changes that could be on the horizon. One of those changes is likely to be consumer demand for environmental sustainability, especially around waste and carbon emissions (Otto et al., 2021).

Organizational Culture Change

As discussed previously, organizational culture change has been pivotal in helping develop safer companies across North America (DuPont Sustainable Systems, n.d.). Safety, like the environment, is an area of improvement for a company that does not have obvious short term financial benefits, at least no financial benefits that completely offset the cost of improvement programs (Vianello et al., 2019). Instead, cost benefit analyses must be conducted for a company

to want to invest in protecting its employees. That is unless that company is motivated to improve safety, or potentially environmental programs, through some other means. Strong company culture can be the driver for positive change within an organization, whether it is safety or environmental programs (Walker & Soule, 2017). Culture can be the force that guides a company towards Trist's vision of organizations, those dedicated to benefiting society, not just shareholders.

Company culture is something that one of our cases has spent much time and effort on. Telus, under its current CEO Darren Entwistle, has made culture change a driving issue of his mandate (Bingham & Galagan, 2012). Entwistle was quoted in 2012 as saying that culture was a competitive advantage for the company. At the time that Entwistle made that statement, Telus had already made Canada's top 100 employers and had received seven BEST awards from the Advancing Talent Development Awards (Bingham & Galagan, 2012). More recently, Telus was recognized by Forbes World's Best Employers 2020 and 2021 list, topping the 25 Canadian companies on that list (Murphy et al., 2021). In addition, culture is a focal point of almost every Telus annual report, despite it being something that does not have an enormous specific financial benefit associated with it. Using the past decade as a reference point, it is safe to say that Telus has and will continue to focus on its culture.

Developing a culture has been a huge driver for Telus to improve its environmental sustainability. In the 2019 annual report Telus identified that "sustainability is an essential part of our culture and is embedded in the processes and behaviours across our business operations" (Telus, 2020). The company self identifies that not only does culture help to retain talented employees, it also has been a key part of their sustainability strategy. Telus has made large commitments to improving environmental sustainability such as being the first Canadian

company to use sustainability-linked bonds (Willis, 2021). If what Telus is saying is true, which has been stated in annual reports, culture is critical to their success.

The Kraft Heinz Company could use culture change in a similar vein as Telus Inc. Telus insists that culture is not only a competitive advantage for them but also a key driver for environmental sustainability. Kraft Heinz should follow Telus Inc's footsteps and focus on organizational culture change. In this analysis, we will discuss how Kraft can use both the Telus model as well as the DuPont one as a guide to improve both their company culture and their environmental sustainability.

Through interviews and annual reports, it appears that Telus' investment in culture change originated with its current CEO, Darren Entwistle. This lines up with the Bradley curves model which suggests that the first step in improving culture within an organization is leadership buy-in (DuPont Sustainable Systems, n.d.). Upon receiving the most recent recognition from Forbes, Darren Entwistle said "TELUS' recognition as the highest-ranking Canadian organization on Forbes' World's Best Employers ranking is a true reflection of and testament to the expertise, passion and commitment of our high-performing team, and the extraordinary, globally admired culture that underpins it. As one of the largest private sector employers in Canada and with our TELUS International operations spanning 20 countries, our team is exceedingly proud that our global leadership in social capitalism, our longstanding values of diversity and inclusion, and our unwavering commitment to improving the social, economic and health outcomes of communities around the world, are being recognized in this way." It is clear, both through his multiple decades spanning effort for improving culture, as well as his comments that culture is something that he is immensely proud of immensely proud of. The first step for

Kraft Heinz to improve their culture, using both models, would be for leadership to adopt culture change as a top priority.

While this may seem simple, Entwistle actually thinks this is one of the hardest parts. In the 2012 interview where Entwistle spoke of the importance of culture he said “I see many mistakes in this area, especially in the failure to start the process with assessment. How can you say there is a continuous improvement environment and a continuous learning environment if you don't understand at an individual level what the continuous improvement requirement is? ... this is why companies don't build cultures based on people as a competitive advantage: it's hard. Developing culture is a long-term undertaking, but it's worth it because it really can differentiate you from the competition in a very meaningful way. Without that long-term commitment, it's difficult for the competition to catch up” (Bingham & Galagan, 2012). The Kraft Heinz Company cannot just say that they are going to develop culture. Resources and time must be allocated to this effort and the benefits will not be readily apparent as culture, under both models, takes time to have an effect.

Choosing to improve its culture is something that Kraft Heinz has not done. There is no mention of company culture in Kraft Heinz annual reports and no mention of culture from top management. The only mention of company culture is coming from managers at a national level such as Brian Kerr, who was the Chief Marketing Officer for the Canadian branch (Horn, 2017). Shortly after he mentioned the importance of culture, Kerr left Kraft Heinz after 18 years of working there to join Kawartha Dairy. The company's sustainability report does mention company culture but focuses specifically on their generic leadership development not culture or cultural sustainability on the whole. Leadership development, while beneficial for upcoming leaders within a company, is not the type of company culture shift that Entwistle or DuPont

pursued as it has less impact on most employees. The fact remains that culture is not being discussed publicly by the top brass of the company. This is something that must change in order for The Kraft Heinz Company to follow in Telus' footsteps.

Assuming top leadership at The Kraft Heinz Company commit to improving their organizational culture, where would the company go from there to improve? Both the Telus model and the DuPont model have specific steps that can be taken to gauge how to move forward. The DuPont model would require The Kraft Heinz Company to identify where on the "Bradley Curve" they are situated. This can be done in a number of ways but should not provoke a specific outcome from the employees. For example, if the company wants to figure out if they are reactive, they cannot simply ask managers and employees if they are reactive to problems. Most individuals would not want to admit that they do not have a good culture for either fear of reprisal or simply acknowledge that they are not as good as they think they are. One way to combat this would be the process that Telus undergoes annually. In the priorities section of the Telus' annual reports, they state "Each year, we conduct team member Pulsecheck engagement surveys to gather confidential team member feedback about TELUS as a place to work in order to measure our progress in creating a high-performance culture." (Telus, 2020).

A survey similar to the one outlined above would accomplish two things for The Kraft Heinz Company. First, it would anonymously gauge where their culture currently resides, whether they would like to use DuPont's framework or not. Secondly, it would reveal specific areas of their company culture that they could target. In the annual report Telus continues "Following each survey, leaders share results with team members and use fair process to build and refine action plans focused on high-priority areas where improvement is required based on Pulsecheck results. In 2019, our employee engagement score was 84%, which is an encouraging

accomplishment against a backdrop of change across our organization over the course of the past year. This result continues to place our Company within the top 10% of all employers surveyed on a global basis” (Telus, 2020). Once areas for improvement are identified, The Kraft Heinz Company could, like Telus, create action plans designed to address areas of improvement. Under the DuPont “Bradley Curve” this would mean identifying ways that would take them to the next level of the curve. The action plans that are used by Telus are not publicly available so to give an example of an action plan, we will review what an action plan under the DuPont system would look like.

As stated in the culture change introduction, The Kraft Heinz Company is likely in a reactive state. Using the Culture 500 project, a joint project by MIT and Glassdoor, we can gauge some of the cultural metrics at The Kraft Heinz Company, submitted privately by employees. The Culture 500 project ranks culture on 9 touchstone metrics (MITSloan Management Review & Glassdoor, n.d.). These are collaboration, customer, diversity, execution, innovation, integrity, performance and respect (MITSloan Management Review & Glassdoor, n.d.). These do not all align with the DuPont system so we will focus on collaboration, integrity, respect and execution. It is not that the other values are not important to an organization, just that they do not directly feed into the four stages of the “Bradley Curve”. Each of these touchstones are given a grade from -2.0 to 2.0 compared to the rest of the companies in the data base.

At the time of writing, 1 945 employees had participated in the Culture 500 project which is a substantial first look at what the culture could be at the company. It is important to note that this is a thought exercise and none of these findings can be considered definitive. The reason being is that The Kraft Heinz Company is a large, multinational company. We do not have data for where these employees are located and whether this gives a picture of one branch of the

company or one area of the world. The data nevertheless can help to identify how the company may use the Telus or DuPont models to improve themselves.

The definition for collaboration is “Employees work well together within their team and across different parts of the organization” (MITSloan Management Review & Glassdoor, n.d.). The company did quite well in collaboration, receiving a 1.6 score. This would appear to be an area of strength for The Kraft Heinz Company. The definition of our next touchstone is integrity “Employees consistently act in an honest and ethical manner” (MITSloan Management Review & Glassdoor, n.d.). This is an area of weakness for the company ranking at a -1.1. Employees not acting honestly or ethically would fall under the reactive heading of the Bradley Curve (DuPont, n.d.). Next up is respect “Employees demonstrate consideration and courtesy for others, and treat each other with dignity” (MITSloan Management Review & Glassdoor, n.d.). The company did very poorly in this metric, receiving a score of -1.6, ranking it at the lower end of all companies surveyed. This again points towards a reactive culture within the company. The last relevant touchstone for the DuPont culture system is execution which is defined as “Employees are empowered to act, have the resources they need, adhere to process discipline, and are held accountable for results” (MITSloan Management Review & Glassdoor, n.d.). This is an area where the company is slightly below average, ranking at -0.1 (MITSloan Management Review & Glassdoor, n.d.). While not directly relevant for the DuPont system, the rest of the scores were as follows: performance (1.6), agility (-0.1), customer (-0.5), diversity (0.2) and innovation (0) (MITSloan Management Review & Glassdoor, n.d.).

The average score of the relevant touchstones was -0.3 with three of the four relevant touchstones being negative. This would place The Kraft Heinz Company somewhere between the reactive stage and the dependent stage of the DuPont system. Unfortunately, Telus Inc was

not listed in the Culture 500 database for comparison. Regardless, to fully reach the dependent stage or to climb further up the curve, The Kraft Heinz Company would have to develop a strategy to address areas of improvement. If the company wanted to follow the Telus approach it would create employee-led action plans to address these areas of concern. Using the Culture 500 touchstones this would mean focusing on integrity, respect and empowerment. Adding in the other touchstones would also include agility, customer, diversity and innovation.

In a real scenario, a survey would include metrics that are more specific to the company (or the relevant culture model chosen) and the survey would include the entire company for holistic results. The next step for The Kraft Heinz Company would be to evaluate if their action plans were successful. One of the ways that they could accomplish this would be through the same method that Telus is employing, annual reoccurrence. Repeating the process, year after year is an effective way of tracking improvement or decline. The important part for The Kraft Heinz Company to remember is what Entwistle said about culture change. It is neither fast nor easy. Year over year the company may see fluctuations in their culture. This could be the result in any number of things from employee turnover to world events to outlying data. The long-term trends are the metrics that The Kraft Heinz Company should follow.

This was one example of how The Kraft Heinz Company could use the Telus and DuPont culture models to improve their own culture. The question that remains is, assuming a positive culture change, how can organizational culture be used to promote environmental sustainability?

Looking back at Telus Inc gives a possible model for Kraft Heinz to follow. As discussed previously, sustainability and culture are directly linked for Telus. In the 2019 annual report, Sandy McIntosh, the People, Culture and Chief Human Resources Officer said this about

social purpose and culture: “We believe that social purpose has everything to do with achieving strategic business objectives and driving remarkable outcomes. Our people – at every level across our Company – are proud of our social purpose because it is central to what we do, why we do it and what we stand for as a culture. Together, we are changing the paradigm on health, education, the environment and social inequities by investing in technology to bridge geographic and socio-economic divides” (Telus, 2019). As Sandy points out social purpose, or the environment specifically, is a critical component of why the culture at Telus works. The belief that there company is working towards making a better Canada helps foster a positive environment that employees and managers are proud to be a part of.

Presumably, if The Kraft Heinz Company follows the Telus culture model, they too could have social purpose and sustainability linked directly into their culture. Regardless of how they do it, as long as The Kraft Heinz Company commits to improving their culture there is an opportunity to also improve their environmental sustainability. According to the DuPont method, a company needs a strong culture to make positive changes within the organization. While the DuPont method specifically focuses on culture, it is likely that a company would have to have a strong culture to improve its environmental culture. While this unfortunately means that culture would not be a “quick fix” for a company like Kraft Heinz, both the DuPont and Telus model focus on sustainable improvement, or improvement that is likely to last through large company transitions or market changes. Organizational culture change, like organizational ecology, offers a unique approach to environmental sustainability, one that few companies have publicly addressed.

Organizational Ecology: Communities, Populations & Organizations

To analyze organizational ecology in the context of Telus Inc and The Kraft Heinz Company, both prominent theories of organizational ecology must be discussed. Hannan and Freeman's traditional organizational ecology is broken up into three levels, communities, populations and organizations. As discussed earlier, the population level examines the populations that are part of any given organization (Hannan & Freeman, 1989). In the case of both Telus Inc and The Kraft Heinz Company this would be the employees of the company. The community level focuses on how those populations interact with one another and how that may affect any given organization. For both companies this includes the interactions of employees, management and all staff in between. With both the populations and community level, it can also include the customer base of each company and how customers affect each given organization. Lastly, the organization level examines the organization itself and how individual decisions made by that organization can determine its success within its environment.

The first level to examine is the populations level of both companies. While each of these companies are significantly different than each other they do have some similarities. Both companies are industry leaders with multiple levels of organization. Both companies are also incredibly large, Telus with 78,100 and Kraft Heinz with 38,000 in 2020 (Statista, 2021). For reference, in Canada a large business has over 500 employees (Government of Canada, 2020). In 2020, Canada had only 1,415 large businesses in total with only a handful over ten thousand (Government of Canada, 2020). In 2021 Telus made Forbes top 2000 companies in size at rank 553 and Kraft Heinz at 436 (Murphy et al., 2021). Telus is in the top 20 largest companies within Canada being topped by the major financial and energy institutions within the country. Both of these companies are in the top 1000 companies on the planet and have similar populations.

As organizational ecology is a theoretical framework and there is no evidence that either company has used the theory explicitly, there is an opportunity for the companies to use the populations level of Hannan and Freeman's theory, especially when it comes to environmental sustainability. There could be an entire paper dedicated to each of the levels of Hannan and Freeman's theory as it pertains to these companies but a cursory analysis will reveal some thoughts for further study.

Firstly, using the populations level of the theory, each company could gauge environmental awareness and environmental eagerness within each company at its different levels. The level of engagement could differ. For example, in Canada climate change was a top issue for voters in the 2019 general election (Shah, 2019). This is especially true for British Columbia which is where the majority of Telus employees are from (Telus, n.d.). It is not a stretch then to assume Telus employees view climate change as a core issue, although a full survey of the company could give more accurate results. If climate change is important to "frontline" employees, is it as important to management? More or less? The annual reports released by the company states that sustainability is a key driver for its employees (Telus, 2019). In the annual report it is stated that "Along with the continued and widely shared concerns about climate related changes and the environmental impacts of business operations, there is an increasing focus on the disclosure of environmental and sustainability governance strategies, targets and risk management practices" (Telus, 2019). Climate change is clearly important to the company as a whole but the populations level of organizational ecology could help pinpoint for the company how each unique population feels about how the company is approaching the topic. In a hypothetical example, this could look like a survey of every employee from call centers to upper management to see how environmental sustainability affects them. Hypothetically is

environmental sustainability more important to upper management because of ESG investing? Or is climate change adaption more important for frontline workers because they want to work at a company that is doing its part to improve its sustainability. These types of questions need answers, especially if a company wants to understand how its internal and external policies affect its employees.

Environmental, Social Governance (ESG) is becoming more important for large companies and their shareholders (Crutchfield & Asghar, n.d.). While it is important to investors, the specific value of any given ESG program is likely less important to frontline workers who interact with shareholders less than management or the board of directors. Understanding the differences and wants of each population can be a critical advantage over one's competitors because it allows environmental initiatives to be more successful, for all of the populations present, not just management.

The former examples for Telus also work for Kraft Heinz, although as an international company it was hard to make a conclusion about the environmental eagerness of its population base. Instead of a company wide approach, The Kraft Heinz Company could focus regionally to discover how its populations interact. These regions can be geographic or sectors of the business. For example, The Kraft Heinz Company could focus specifically on its United States employees to figure out how every employee from tomato farmer to CEO feel about any given environmental policy. The company could instead focus on sectors. How do the employees of the cheese side of Kraft Heinz differ from the employees of the ketchup side? Both strategies would simplify the task in front of The Kraft Heinz Company and both would still utilize Hannan and Freeman's organizational ecology.

The next level of Hannan and Freeman's organizational ecology theory is communities. This level is similar to populations and looks at those same groups. The chief difference between the populations level and the community level is that the latter focuses on how the former interacts with one another. In the case of environmental sustainability at Telus and Kraft Heinz this theory could be useful in a couple of ways. Firstly, how your customers and frontline workers interact could be a vector to gauge the interest in sustainability initiatives that your company is trying. Particularly with Telus, customers interact with many employees, from brick-and-mortar stores to online and phone tech support. Quickly, surveying customers and staff to see how current environmental goals are being handled and whether or not each individual group approves or has any additional suggestions for improvement. The company already does this annually as part of its culture survey, as seen in the annual reports for Telus (Telus, 2020). It would just require Telus to expand this sort of survey to its customers so it could make comparisons and conclusions more holistically.

For Kraft Heinz, the community level as it pertains to environmental sustainability could be how the supply chain globally reacts. The current 2021 ESG environmental plan includes but is not limited to electricity savings, water savings, circular ketchup bottles, waste reduction, recyclable/reusable/compostable packaging, sustainably sourced ingredients, no palm oil, free-range eggs etc. (The Kraft Heinz Company, 2021). These goals are vague, not specifying if they apply to the whole company or certain sectors or geographic regions. Regardless, any or all of these are likely to cause changes at all levels of an organization. Simplifying the supply chain for just Kraft Hienz ketchup, there is raw supply (tomatoes etc.), processing, warehousing, transporting and stocking (Kraft Heinz, n.d.). Being able to gauge how an environmental initiative impacts one group or another is critically important to both being successful at the

initiative as well as keeping the company as successful as possible. What impacts your tomato farmers may not have the same impact on your warehouses. An example would be if Kraft Heinz launched a fossil fuel or water saving initiative. The fossil fuel initiative is likely to adversely affect the raw materials and transporting branches more than the processing and stocking. A water saving initiative is likely to impact raw materials and processing more than any other. Doing a formal organizational ecology analysis can help Kraft Heinz to identify how these changes might affect each sector or region of their company. The toolset would allow them to be precise in future policy adjustments to help to ensure that environmental initiatives are successful. The Kraft Heinz Company boasts that they produce more than 200 household brands (Kraft Heinz, n.d.). Tracking how an initiative is going to affect your company becomes incredibly complicated and using the community level of organizational ecology may help alleviate some of that complexity. It is perhaps even more important for The Kraft Heinz Company with this current sustainability plan due to the company failing to meet its previous sustainability targets (Querolo, 2020).

The last level of Hannan and Freeman's organizational ecology that could be of benefit to both case studies would be the organizations level. Perhaps the most apparently useful when it comes to environmental sustainability, the organization level focuses on the organizations themselves and how leaders within a company can make decisions that will best prepare that organization to survive in the environment they find themselves. Telus Inc operates in several different environments. These include regional environments within Canada all the way to the national Canadian environment. Telus has a stronger presence in Western Canada, where it was founded. Its strategic approach in that area differs from what its National strategy would be. Its competitors fluctuate between regions and so must its approach to different areas. Using this

form of organizational ecology could be useful to Telus because it would inform them of how their organization fares currently and how future decisions could impact the success of the company. Bringing it back to environmental sustainability, any sustainability initiative would be a decision that would impact the company's success within its environment, both positively or negatively. Understanding the very nature of the organization as well as decisions that have been made past, present and future could be a critical factor of success for Telus. Telus is already focusing on environmental sustainability as a competitive advantage for itself over its local competitors (Telus, 2020). Any tool or process that can add precision to actions towards this goal is worthy of consideration. For example, Telus has largely focused on sustainable investment based on climate targets such as green bonds and sustainability-linked bonds. These are great initiatives but are broadly focused on making the company more sustainable. Organizational ecology can help to inform specific strategies that would both support Telus' current investor strategy as well as reveal new avenues for sustainability internally and within Telus' business ecosystem.

The Kraft Heinz Company could use the organizations level of organizational ecology in a very similar way albeit with different regions of the world and different products. Similar to Telus, any environmental strategy would hit differently depending on where in the world you operate. As covered earlier, climate change is becoming an increasingly large issue for Canadians across the country, although the importance of climate change within Canada is regional (Shah, 2019). This is not the case everywhere however. While a majority of Americans believe that they are not doing enough to protect the environment, this sentiment is regional and not specific to climate change (Funk & Kennedy, 2020). In the southern United States, the majority of people do not see the impacts of climate change nor believe it is as serious as many

are saying (Funk & Kennedy, 2020). The differences between Canada and the United States are just two examples of regions and environments that Kraft Heinz has to operate in and be successful. The previous head of Kraft Heinz Canada spoke in length in a 2017 interview about how different the culture was between divisions of the company (Horn, 2017). In this interview Kerr spoke of how difficult it was to manage a company with so many products, priorities and customers, especially right after an enormous merger (Horn, 2017). Using the organization level of Hannan and Freeman's organizational ecology could be useful in navigating this complexity and could give the company a specific tool in translating that complexity into workable action. As discussed previously, the best way forward for Kraft Heinz may be to adopt organizational ecology by region or sector to reduce this complexity.

Organizational Ecology: Eric Trist

While Hannan and Freeman's theory of organizational ecology may have been the first, it is not the only theory to have permeated academia. Eric Trist, a York Alumni, believed that cooperation between organizations was critical to their long-term survival. Similarly, to Hannan and Freeman, Trist believed that the environment that a company found itself in would shape its successes and failures and that organizational ecology was a way of understanding how to do just that. Where he differed was his belief that organizations have to be a positive catalyst for change for society (Trist, 1983). Monetary success was just one way to gauge the overall success of a company. The positive impact of that company was as well its ability to work with others to solve "meta" problems that plagued society. Trist defined meta problems as issues that are too vast or complex for any one organization to solve (Trist, 1983). Climate Change absolutely fills the criteria to being a "meta" problem. No individual company, government or NGO is going to

be able to solve climate change. It is a problem that must be solved nonetheless as the consequences of doing nothing will be catastrophic for the world (Gates, 2020).

The vision that Trist had for organizations is not dissimilar from the Social Purpose business model that many non-governmental organizations have been suggesting over the last few years (Best et al., 2021). The United Way defined a social purpose business as “a company whose enduring reason for being is to create a better world. It is an engine for good, creating social benefits by the very act of conducting business. Its growth is a positive force in society” (The United Way, n.d.). Trist’s organizational ecology also posits that companies should exist to better society. The key differentiator is that social purpose businesses are focused internally. A company identifies as a social purpose business and works towards meta problems independently.

Trist’s organizational ecology instead focuses on the relationships of organizations within their environments and how those relationships can be shaped to solve problems that would be impossible alone. Companies discussing and adopting a social purpose model can only benefit society but will be inherently limited in that no individual company, government or other group can solve climate change on their own. This is why I believe that Eric Trist’s organizational ecology model can be used to compliment social purpose businesses in creating sustainable change.

The benefits of Eric Trist’s organizational ecology when it comes to environmental sustainability are much more straight forward than those of Hannan and Freeman. Environmental sustainability can be profitable for a company but the benefits are not always as evident. If a company pursues environmental sustainability as a method of solving the meta problem of climate change or to positively impact society then the

rewards can be immediately evident because society has been made better. It is not necessarily linked to environmental sustainability Whether it is happier employees because equity and diversity are empowered or consumers are more loyal because they see a company give back. Trist's vision of organizational ecology is that of creating a better world.

Climate change will be a defining phenomenon for organizations in the coming decades (Kopnina & Blewitt, 2015). Its effects will negatively impact many companies and the way that they operate today. It is also a problem that is unsolvable alone. Companies worldwide, including Telus Inc and The Kraft Heinz Company could use Eric Trist's version of organizational ecology to help combat the colossal meta problem that is climate change. Specifically, these companies could utilize Trist's theory of "proactive communal arrangements" (Trist, 1983).

The cosmetic company *Burt's Bees* were part of a collaboration of this exact type. The company had ambition to make itself more sustainable, but there was not a third-party sustainability program available. Instead of just creating another inhouse label to join the thousand of other meaningless greenwashed labels, *Burt's Bees* went to its competitors and created an industry label. Not only did it help *Burt's Bees* sustainability image, and therefore profitability, it made the entire industry more sustainable(Elyse, 2021). Now imagine the impact this type of collaboration could have with companies like *Telus* and *Rogers* or *Kraft Heinz* and *Nestle*. The sustainability label that Burt's Bees and competitors made is still in use even after the company was purchased by Clorox. The company is also still highly regarded for its efforts to improve its sustainability (Elyse, 2021). Both Telus Inc and The Kraft Heinz company could also benefit from this type of arrangement.

For Telus Inc there are a couple of arrangements that they could try. The first would be with their competitors. Telus is fairly unique as a telecommunications company worldwide because Canada does not have very many competitors. This could make these arrangements either much easier or much more difficult. If Telus were to sign a sustainability pact with Bell and Rogers, its chief competitors, almost the entire telecommunications industry in Canada would be signed onto becoming more sustainable. Using *Burt's Bees* as a potential model, Telus could create a joint sustainability label with its competitors.

The Burt's Bees "natural seal" sustainability label came out in 2008 in partnership with an NGO called the Natural Products Association (NPA) (Grinnell, 2008). The "natural seal" which at the time of development was on 95% of *Burt's Bees* products was so popular that other industry leaders joined on to the program which currently includes 1 900 members and more than 10 000 retailers (NPA, n.d.). The specific label or method of creating a label will not work for Telus for a couple of reasons. Firstly, the NPA label was specific in that it used natural ingredients, something that is next to impossible for the products and services that Telus provides. Secondly, the landscape today is significantly different than it was in 2008. The good news here is that climate change and sustainability is more prevalent and any created standard could potentially be more ambitious.

A sustainability label for a telecommunications company would look substantially different from the model that was used for *Burt's Bees* and its competitors. Internationally there is not a precedent for sustainability labels for companies who provide cellular service. There is however, sustainability labels such as *Eco Rating* which

is to be used by providers in Europe to rate cellular phones on how climate friendly, they are (Baldock, 2021). Any sustainability label that is used by Telus would have to incorporate some sort of rating like this as cellular acquisition is one of the primary facets of customer interaction for the company. Rating cell phones themselves however is not enough for a company like Telus because they do not actually manufacture the phones. Other than not carrying phones that do not have passable climate ratings, Telus would not have internal or external control over how sustainable their company is because they cannot exert much more than pressure to make these phones sustainable.

The sustainability label would also have to include sustainability metrics in areas that Telus can control. There are a couple of ways that Telus could accomplish this, one of which would be through financial incentives that push greenhouse gas emissions down. Telus has already begun this process within its own company. In June of 2021, Telus Inc became the first Canadian company to issue sustainability-linked bonds (SLB) (Willis, 2021). Sustainability-linked bonds were developed in Europe as a way of thinking financing to Environment, Social Governance programs. In essence, Telus debt will pay 2.85 percent in annual interest over the next 10 years which is a drastically lower rate than companies would pay on traditional bonds (Willis, 2021). In turn, Telus has committed to lowering its greenhouse gas emissions by 46% by the end of the decade. If Telus does not reach that target, its bonds will increase to 3.85 percent after that date. When asked why the company pursued SLBs, CEO Darren Entwistle said

“The successful completion of our sustainability-linked bond reinforces our long-standing leadership in social capitalism. Our science-based, greenhouse gas emissions reduction target further validates our commitment to reduce our carbon footprint and care for the planet that our children will inherit.”

Through this action Telus has shown that environmental sustainability, especially sustainability aimed to combat climate change, is an area of focus for the company. They have done so by creating a real financial interest for Telus to cut those emissions down. A sustainability-linked bond is in a fashion already a proactive communal arrangement, even if it was not designed specifically for that purpose. It is an arrangement between a company and its investors, one that is designed to both make a company improve its standing within society as well as create a competitive advantage if it does succeed.

Sustainability-linked bonds are a great way for individual companies to increase their environmental sustainability in a way that keeps them financially competitive. The next best thing would be SLBs as part of a label created through a proactive communal arrangement. The sustainability label in question could include an eco rating system for phones carried, SLBs for GHG emissions or diversity and inclusion targets or any other countless sustainability measures they so choose. Just using the previous examples, the label would communicate to its customers that Telus and its co-signers care about the phones that they carry, are actively working towards GHG reductions with financial penalties and are dedicated to rectifying decades of exclusionary hiring practices. The financial penalties to sustainability-linked bonds would also communicate the strength and accuracy of this label. It would prove that it was not a greenwashing tactic but a dedicated effort to improving the entire industry.

If Telus could get either Rogers or Bell to sign onto an agreement like this as part of a sustainability label it would transform the entire industry in Canada. For example, if Telus got Rogers to sign onto a label like this it would impact and permeate through the following companies: Rogers Wireless, Shaw Mobile, Freedom Mobile, Fido Mobile,

Chatr Mobile, Cityfone, Zoomer Wireless, SimplyConnect, Primus Wireless, Telus Mobility, Koodo Mobile and Public Mobile. That represents about half of the total number of telecommunications companies in Canada and 66% of the total consumers in Canada (Telus, n.d.)(Rogers, n.d.). This would put pressure on Bell and other smaller Quebec based companies to join in to show that they also care about sustainability. A sustainability label is one way that Telus could undergo a proactive communal arrangement with its competitors but there are many other ways that Telus could go, such as? This idea is not as impossible as it sounds. In the press conference around announcing sustainability-linked bonds, Telus treasurer Stephen Lewis said: “Our advice to other companies on SLBs is to just do it. It’s good for the planet, it’s good for customers, it’s good for the company, and the investor demand for these financings couldn’t be stronger.” Telus is encouraging other companies to pursue this type of arrangement, suggesting that they could be interested in working on strengthening the industries sustainability profile.

In reality, getting all three mega-telecommunications companies on board may be extremely difficult without government intervention since each company is trying to one up each other. It is likely why Telus is pursuing sustainability links bonds on its own as opposed to partnering with another company. While Telus may be interested in this type of arrangement, as of July 2021, none of the other major telecommunications companies have shown public interest.

In an ideal world, Telus would have to enter a proactive communal arrangement with another type of organization, governments.

The benefit for the nation of an arrangement with governments would be that the governing body would get to set the boundaries for sustainable action. In the case of a government that is looking to reduce greenhouse gas emissions would be that these targets would be actual targets as opposed to greenwashing. While it is entirely possible for the government to

also engage in greenwashing, the public opinion of climate change is changing and citizens are counting it as a top election issue (Taber, 2015). This would hopefully mean that citizens are more likely to hold their governments and prevent public greenwashing, at least federally.

The downside of this type of arrangement is that the government would have to provide a real incentive for Telus to want to engage, otherwise they may put themselves at a financial disadvantage to its two main competitors. Without intimate knowledge of Telus Inc's tax structure, it is hard to me to say what these incentives might look like but the federal government especially could work with the larger companies within Canada to help us reach our GHG targets. If the federal government turns out to not be feasible, Telus could approach provinces that it works in, especially British Columbia for these types of arrangements.

Proactive communal arrangements for The Kraft Heinz Company are inherently more complex than Telus because of its industry and global nature. The Kraft Heinz Company's competitors are some of the largest companies on Earth and are all international, multi-brand conglomerates like Nestle, Coca-Cola and Pepsi. If an ideal world was required for an arrangement for Telus, a near perfect one would be needed for The Kraft Heinz Company. Unlike Telus, drastic government intervention is even unlikely due to the international nature of The Kraft Heinz Company. If one jurisdiction required sustainability, the company could rebase to a country that was not requiring such measures. While this may be changing, especially with the EU looking to charge border tariffs on countries without climate action, it is not currently the case (Plumer, 2021). The only realistic way that The Kraft Heinz Company would come to the conclusion that sustainability for the planet's sake is worth it would be in tandem with organizational culture change.

As we will see with Telus in the culture change section, organizational culture can be used to “bake” sustainability into a company. It is not a coincidence that Telus is embarking on sustainability programs not seen previously in Canada and also has one of the countries strongest company cultures (Murphy et al., 2021).

One possible version of a proactive communal arrangement would be the one that Telus has already pursued. A sustainability-linked bond, a form of proactive communal arrangement with investors, could be an important first step for The Kraft Heinz Company. Sustainability-linked bonds are still a novel concept, being created by the Italian energy company *Enel* last year in an effort to strengthen their green bond portfolio (Hay, 2020). Since then, it has become increasingly popular throughout Europe and as discussed prior, Telus has become the first company in Canada to join on. In the first quarter of 2021 sustainability-linked bonds worldwide stood at \$43 billion (Jessop & Murugaboopathy, 2021). This is only a year after it was first used by *Enel*. Perhaps more impressive is that the first quarter also saw a record high for green bonds and social bonds, putting the combined total (including SLBs) at \$264 billion (Jessop & Murugaboopathy, 2021). There is clearly interest in the investment community to fund companies who are interested in benefitting society where that be through green bonds, social bonds or sustainability-linked bonds.

Proactive communal arrangements rely on an organization working with another group to help benefit society and begin to solve complex meta problems. Sustainability-linked bonds are designed to help companies begin to address climate change while only having to work with another group that they already rely on, investors. While it is hard to imagine a situation where The Kraft Heinz Company leads its peers through a new sustainability label or drastic industry changes, a sustainability-linked bond seems more feasible. For one thing it is designed to give a

company a financial edge on its loans if it is able to reach its sustainability goals. For a company like The Kraft Heinz Company which has struggled to meet its own internal sustainability goals this could be a driven to a more successful sustainability program (Querolo, 2020).

This could be an important step for The Kraft Heinz Company to improve their overall sustainability. The company could start with general greenhouse gas emission reduction targets as part of a sustainability-linked bond program then move to other type of bonds. Green bonds could be used to fund green initiatives at frontline facilities or social bonds could be used to help increase equity and diversity throughout the organization. Regardless of the type, this would be a form of Eric Trist's organizational ecology.

5. Conclusion

Climate change is one of, if not the most, important issues facing humanity. It is a looming threat that knows no borders and if left unchecked will impact the world more than any other threat that plagues modern society (Gates, 2020). Something has to be done about solving the crisis. Growing up, millennials and generation Z were told that they could help “beat” climate change by recycling or using reusable water bottles. We were told that “saving” the planet was in our hands. The reality is that forcing the responsibility for fixing this problem onto individual was never going to work nor was it fair. As of April 2021, the private sector, including oil/gas, agriculture, heavy industry, waste and commercial transport contribute to more of the emissions in Canada than individual residents (Environment and Climate Change Canada, 2021).

The burden for combating climate change cannot solely rest on the individual. Business and similar organizations also have to step up.

Changing the way our organizations operate is not going to be quick or easy. That does not mean its not important and necessary. Organizations, which are ultimately human constructs that can be changed as we see fit, must benefit society if we are to thrive in a climate uncertain world. As environmental activist Greta Thunberg has said “We can’t save the world by playing by the rules, because the rules have to be changed. Everything needs to change – and it has to start today.” Businesses have to change the way they have been operating and the way they view the world. This paper sought to examine two processes that organizations could adopt to help “change the rules” to help them create positive, sustainable change within their organization. These tools, organizational culture change and organizational ecology, were viewed through the lens of two established and longstanding companies, Telus Inc and The Kraft Heinz Company.

The question that was addressed in this paper was can organizational ecology and organizational culture change be used to create more sustainable companies? Are they ideal or realistic solutions for these two companies or industry as a whole? or Telus Inc, culture change has been a self-identified tool of success for them. They have claim repeatedly that culture change is not only a competitive advantage for them but also a driver for environmental sustainability. They are leaders in Canada when it comes to programs like sustainability-linked bonds or promoting internal culture, making international culture lists like Forbes Top 100. The story that Telus tells is one where culture can be an integral part of sustainability.

For The Kraft Heinz Company culture change presents a key challenge. They have traditionally struggled to meet their sustainability targets and it is reasonable to conclude that they need to make a change in order to do so seeing as they have yet to reach a long-term target

(Querolo, 2020). The benefits of a strong culture are evident when looking at the Telus structure. While it is unlikely that The Kraft Heinz Company could follow exactly in Telus Inc's footsteps (due to being in a different industry and being in more jurisdictions) they could adopt different culture models to help them achieve this goal. In this paper I evaluated how either the Telus model or the DuPont Sustainable Solutions model (The Bradley Curve) could be used to promote positive culture change. The conclusion that was reached in this paper was that it can be used to promote positive culture change but it will require a concentrated effort of behalf of whatever company wishes to adopt them. ?

When it comes to culture change, there are a few avenues for future research. More direct access to how Telus Inc achieved its culture transformation through interviews with key management or evaluating their culture surveys/action plans could help future researchers to nail down how to replicate their model across industries. More specificity when it comes to the cultural journey that Telus Inc embarked on would also help to support culture as a competitive advantage. It is easy for the company to say that it is a competitive advantage but without interviews with employees across both Telus and the rest of the industry it is hard to prove that point. It may be hard to get Telus to submit to this type of external investigation, especially as they view it as a competitive advantage. A way around this may be to promote it as another way to increase their internal sustainability as that is an area that Telus has shown great interest in.

Another avenue of future research could be to detail how The Kraft Heinz Company could undertake a culture transformation. Interviews with employees and managers would give a more accurate depiction of culture than a public database can and would further understanding on how they can improve their culture. The complexity of The Kraft Heinz Company also means that further research would have to reconcile with the fact that one model is unlikely to work on

such a massive, international company. Future research, focused on a specific sector of the company and how that sector could improve its culture could be a model for the rest of the company to follow if successful.

Similarly to how culture transformed safety culture across North America, culture can be used to promote sustainability, or at least it has for Telus Inc. Exploring how it can be used further should be a focus for future research because it can be used to help companies change the rules as Greta so wisely stated. Making your company a better place for your employees is not only good for the planet but also improves at least a portion of society. Of the two processes featured in this paper, culture change has perhaps the strongest case for environmental success because there is a Canadian example of it working for precisely this reason

The second organizational process that was evaluated in this paper was organizational ecology. Organizational ecology is a theory that has existed since the 1970s in various iterations. Unlike organizational culture change it has largely stayed an academic exercise, especially in recent times. In this paper, both the original model, developed by Hannan and Freeman, as well as Eric Trist's version were applied to the two case studies. Hannan and Freeman's model could be useful for both case studies to understand the business environment they exist in. Neither company is explicitly using organizational ecology and both could benefit in understanding how their environments mimic real ecology.

When it comes to improving environmental sustainability however, Hannan and Freeman's model is unlikely to make real systemic change for either company. It is easier for both companies to adopt modern theories like ESG, social purpose or corporate social responsibility to improve their environmental sustainability. While I believe that using organizational ecology will make companies better, for themselves and for society, I also believe

that it is a stretch to imagine them actually doing so. Future research could be undertaken to deeply analyze each of Hannan and Freeman's organizational ecology levels but in my opinion, it is better to focus on Eric Trist's version of organizational ecology.

Eric Trist's organizational ecology model focuses on his core belief that companies exist to better society. This is similar to social purpose business which has been picking up steam globally (The United Way, n.d.). Trist believed that the best way for organizations to better society was to enter what he called proactive communal arrangements to solve complex "meta" problems. The "meta" problem that this paper focused on was climate change but any number of "meta" problems could be addressed through this method including but not limited to COVID-19, equity in the workplace, diversity, gender equality and many more.

I believe that both Telus Inc and The Kraft Heinz Company would benefit greatly from using Trist's proactive communal arrangements. The benefit of a proactive communal arrangement would be colossal if done correctly. In the case of Kraft Heinz, if one of the largest food producers on the planet adopted a shared sustainability goal there could be major shifts in the damage that these food companies are causing. If it worked, other large industries may follow suit, or they may be forced to if consumers start expecting it after seeing greater sustainability result. It is incredibly unlikely to occur in a vacuum but it is clear that Trist's theory is the one of best organizational ecology theories for creating positive environmental change especially compared to Hannan and Freeman which it was compared to in this paper. It just might be unfeasible in the world's current corporate climate.

While it may be unlikely to occur today, especially for a large international company like The Kraft Heinz Company, there is a case for future research. Since creating companies that want to better society is so valuable, I believe it is beneficial to continue to research how to make

such a model feasible. Trist developed his theory decades ago, prior to the modern adoption of social purpose business. In the past few years, companies have started to invest more in things like ESG, diversity and equity. Both of the annual reports for Telus and Kraft Heinz heavily featured these topics, showing real momentum. Updating Trist's theory to better fit with modern business and melding it with social purpose may reveal a method to capitalize on this momentum and achieve Trist's vision of better organizations, even if the model itself differs from what he originally presented. There is a lot of potential in the idea that businesses can be a major part of the solution to issues such as climate change.

Both organizational culture change and organizational ecology can be used to make companies better for society and better environmentally. Of the two, culture change is the more likely to achieve consistent results in the near term, as seen with Telus, but both have the potential to make their companies better. Something has to be done to combat climate change and that something has to happen sooner rather than later. Culture change has helped Telus and it could do the same for Kraft Heinz. Organizational ecology under Trist could also make both companies even better when it comes to environmental sustainability.

Changing the way our organizations operate is not going to be a quick or easy change. Using these tools can help these organizations make the change. That is the future worth fighting to create.

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