

SEARCHING FOR SHARED MEANING:
DEFINING AND MEASURING SUSTAINABILITY AS INSTITUTIONAL
WORK AND ORGANIZATIONAL CHANGE

A Thesis Submitted to the College of Graduate and Postdoctoral Studies
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Abstract

About me

In my schooling, worklife, and even childhood interests, the natural sciences played a big role. Although I certainly derived inherent satisfaction from many aspects of natural science, I was primarily motivated by an interest in engaging with environmental challenges and believed that environmental sciences were essential to doing so. I believe in the value of environmental science to understand the natural environment, but I have seen very limited evidence of its value in changing organizational behaviour. My interest in sustainability reporting arose because it fit with my rationalistic understanding of integrating environmental information into organizational decision making and translating it to action. I became interested in the organizational literature because I wanted to better understand my own frustrating experiences of largely unsuccessful efforts to promote organizational engagement with sustainability.

Purposes

The main purposes of this dissertation roughly correspond to its central chapters. The purposes of Chapter 2 were to understand the term *sustainability*, and secondly, to present an alternative to ‘defining a term’ through denotation by documenting senses in use and their contexts. The purposes of Chapter 3 were to characterize the academic literature on sustainability reporting in higher education and the methods used to approach the problem. The purposes of Chapter 4 were simply to introduce the reader to an institutional perspective and help them through Chapter 5. The purposes of Chapter 5 were to understand the experiences of *sustainability entrepreneurs* with sustainability reporting at higher education institutions and to integrate organizational change literature (by sustainability entrepreneur, I mean someone who champions sustainability in an organizational context and in doing so, tries to engage with its institutions). Throughout the dissertation, I explore the value of collaborative approaches to resolving the uncertainty associated with complex problems.

Approach

I used multiple approaches. Throughout the dissertation, I used personal reflection, reading, and writing. To understand the meaning of *sustainability*, I drew on a semasiological approach to document and synthesize the many senses of the term. To understand the experiences of sustainability entrepreneurs with sustainability reporting in higher education institutions, I held semi-structured conversations with them and contextualized their experiences through institutional perspectives.

I cited various literatures in this dissertation. To contextualize my exploration of the meaning of *sustainability*, I relied on the semantics and sustainability literatures. To explore the sustainability reporting in higher education literature, I read a set of articles that met search criteria, rather than a cohesive, distinct literature. To contextualize the experiences of sustainability entrepreneurs with sustainability reporting, I used the institutional literature.

Findings

Sustainability entrepreneurs tend to have reflected deeply on the meaning of *sustainability*, and used it in many senses, some of which reflected their efforts to communicate effectively in their organizational and social contexts. A linguistics approach helped to illustrate how senses evolved over time and in interactions with others to develop shared meaning.

The emerging industry standard for sustainability reporting in higher education is the Sustainability Tracking, Assessment & Rating System (STARS). Scholarship had not contributed to its evolution or its evaluation. The broadest questions about sustainability reporting are over its effectiveness, which can only be addressed with a framework external to the sustainability report, ideally through rigorous scholarship. The scholarly literature had very little to contribute to these questions.

For most sustainability entrepreneurs, although the outcome of reporting could enable formal organizational change initiatives, the greatest value tended to derive from the process of reporting. Sustainability reporting both enabled sustainability entrepreneurs to communicate using the rationalistic language of control and conferred legitimacy to sustainability initiatives. With that legitimacy, sustainability entrepreneurs could perform institutional work, using their creativity and empathic abilities to find shared meaning with their conversational partners, enabling individual and collective agency.

Implications

The sustainability challenge is a complex, intersubjective phenomena. We have traditionally engaged with the challenge through rationalistic approaches with—as yet—limited effectiveness. Collaborative approaches do not preclude or devalue rationalistic approaches; they recognize the reality that much of human and organizational behaviour is extrarational. Unsustainable practices have become institutionalized; challenging an institution requires developing agency. This exploration of the experiences of sustainability entrepreneurs suggests that collaboratively grounding reporting in the experiences of staff can enable more effective reporting, better practices, and more professionally fulfilled staff. Collaboration allows the integration of experiences, which can enable change in complex systems.

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Dedication

This PhD journey has been a long ordeal—an odyssey, as Keith Walker has called it. Picturing the PhD as a solitary battle against many-headed monsters holds some truth value for me and likely many other students. Many PhDs have told me that persistence and grinding through adversity was the key to finishing. Navigating through the obstacles of the dissertation undoubtedly required some individual personality attributes; in my case, they were overwhelmed in importance by the love and support of the people around me. I am impelled to acknowledge my privilege and express my gratitude. This dissertation— a small, quaint symbol of my effort and love—is dedicated to my family: Molly and Ronan; Angelina and Dan; Michelle, Jason, Annie, and Taras; Linda and Tim.

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1 Introduction

This introduction grew out of a committee meeting assignment. I was finding writing difficult and committee members Michael Epstein and Keith Walker thought that I just needed to write without academic constraints. They recommended I write in plain language about 1) my personal journey during this PhD and how my thinking had evolved and, 2) a fourth ‘bin’ containing thinking that did not cohere with other chapters.

This PhD started out with a discrete interest in sustainability reporting. As I detail below, my interest in sustainability reporting grew out of my desire to move beyond an intellectual understanding of sustainability to a more pragmatic, active engagement with it. I started with an implicitly rationalistic logic: a bumpy but sure path from knowledge to action. In an organizational context, this translates to sustainability reporting producing actionable knowledge, which produces organizational change. As I engaged with the issues, I realized sustainability reporting itself can be a form of organizational change. Organizational change without hierarchical coercion is about collaboration. So broadly, this PhD is about sustainability and collaboration. I examined these topics through different perspectives—semantics, sustainability reporting, and institutionalism—by which I mean I read a lot of those literatures and integrated some ideas.

1.1 My path into sustainability reporting

My first job was at the Saskatchewan Watershed Authority (SWA) and the biggest theme of my time there was the “reorg.” After the 2001 North Battleford *cryptosporidium* outbreak (which followed the 2000 Walkerton *E coli* outbreak), public interest and political will were high enough to do something about water management challenges. When Commissioner Laing’s inquiry concluded, some of his major recommendations—that the province needed to incorporate source water protection into water management, and a single department should be responsible for both—were actually implemented. SWA was formed in September 2002 from the merger of SaskWater and the Saskatchewan Wetland Conservation Corporation with some self-described misfits from Sask Environment thrown in. The idea was that SaskWater (traditional water management) + Saskatchewan Wetland Conservation Corporation and Sask Environment (environmental conservation) = source water protection. Organizationally, that translated into these additional staff forming a new Stewardship Division to implement this new mission, added to three divisions of SaskWater. I was hired by SWCC in 2002 and quit just before the newly elected SaskParty reorg in 2007, so I was both witness and participant of this organizational change process.

SWA had a clear, specific mandate (source water protection) and strong political support (SWA and source water protection were babies of the NDP government at the time) and even in this case, it was challenging to incorporate an environmental perspective. My dominant memory is of the mismatch between SWA's mandate and the Stewardship Division's struggle for resources. Stewardship had the smallest budget, the majority from funders with their own priorities, and a relatively high proportion of contract staff. How SWA allocated its budget and human resources were indications of Stewardship's lower status. SWA's mission clearly involved change and centering stewardship-related disciplines but culturally, real water management was performed by engineers and hydrologists, and the organization favoured the status quo. Another source of dissonance for me was the gap between the Stewardship Division's planning process and organizational behaviour. The planning process was rationalistic, with considerable internal and external consultation. Superficially, what we were doing made perfect sense. However, in terms of observable behavioural changes, I could not make sense of my experiences. It seemed that the variation I was observing had little to do with an overarching plan, executive leadership, the technical merits of a project, or even any natural resource management theory and more to do with the random chance of the initial distribution of organizational resources and historic practices. The progress the Stewardship Division did make had more to do with individuals reaching out across former organizational boundaries to their colleagues, exercising their individual influence, and gradually forming productive, positive relationships. In other words, how successfully the organization was incorporating environmental sciences had little to do with environmental science. I did not have a formal theoretical framework or personal heuristics to understand these experiences.

My next job was working for consulting firm GENIVAR in Alberta. At the time, GENIVAR was busy acquiring anything that moved, growing from 5000 to 15000 employees during my time there (now 50000 and the largest pureplay consultancy). GENIVAR was therefore a collection of loosely connected suborganizations. I worked in the environment unit doing aquatic assessments. The Canadian environmental consulting industry was largely driven by the *Fisheries Act*, both for fish habitat work and as the single most frequent trigger of the *Canadian Environmental Assessment Act*. The *Fisheries Act* is one of the oldest acts in Canada, enacted in 1868, and even with periodic revisions to the *Act* and reorganizations at Fisheries and Oceans Canada, has provided a relatively stable regulatory environment. However, there was never a shortage of project managers approaching their deadlines shocked to learn of its existence and potential implications to their project. They had not thought about an environmental assessment, so they would have to tell their clients that they were late and overbudget because of stupid environmental red tape. This refrain was common in the construction industry, so common, it was common sense to get rid of all that red tape. In 2012, omnibus bills C-38 and C-45 precisely gutted the *Fisheries Act* (it was primarily sections 35 and 36 that were causing all the consternation), significantly revised the *Canadian Environmental Assessment Act*, and temporarily gutted the environmental consulting sector. Environmental consulting fees were typically 0.3–0.5% of project costs so the complaints about environmental costs were largely overblown. However, environmental regulations could and frequently did cause delays. The alternative to gutting the *Fisheries Act* was simply for environmental staff to be involved early in projects to address regulatory approvals for more effective, more efficient project planning and

management. This was actually the case within our firm in Québec but not in other jurisdictions, or indeed, most other firms. This solution was much easier to conceptualize than to implement. The solution would have involved firstly, recognizing that environmental information can have some implications to a construction project and secondly, including an environmental perspective in project management. This seems like a trivial change, but it can also be conceptualized more radically, perhaps as a minor recalibration of internal power dynamics or of one's worldview. That most construction and consulting companies had still not sufficiently included environmental perspectives in project management to avoid project delays—despite the clear and consistent signal from the *Fisheries Act*—indicates how difficult it was to slightly elevate the status of environmental perspectives. In fact, most consulting and construction organizations thought it would be easier to lobby to change the regulatory environment and were ultimately proven correct. Environmental units such as ours could not dictate how other more powerful units managed their projects. The only tools at our disposal were to form positive, productive relationships with individual project managers one project at a time.

A dominant theme of both work experiences was a sense of futility. One aspect of that was the standard of 'science' I was performing was relatively low. For example, at GENIVAR, the environmental assessments I conducted had little to do with a rigorous approach to addressing a question—as defined by research norms I had learned during school—and everything to do with observing norms that had developed over time between project proponents, consultants, and regulators, which I felt generally did a poor job of addressing even the narrow, specific question of a particular project's environmental impact. Although biologists frequently used the term *field*, for example, we might say “out in the field,” I would hazard that most of us had never heard of the concept of the (organizational) *field* or understood how profoundly the organizational field was shaping our work lives. The gap between how much I valued environmental science and how much actual demand there was for it was perhaps a slight affront to my professional dignity. However, more broadly and more significantly, I felt that even if I had conducted an environmental assessment to a more rigorous standard, it would have made little difference to any downstream behaviours by any of the parties. A scientifically rigorous standard might even be detrimental: I could see the most highly educated coworkers with organizational resources (i.e., engineering PhDs) consume most of the project budget to find an academically satisfying solution without solving the client's problems or providing information relevant to decision making or design. I was responsible for a small step in the resource management process, but my experiences provided me with little evidence of that step's utility. It is extremely difficult to reconcile my experiences with a sense of adding value to the resource management process. It is far easier to label my experiences as bullshit work, specifically box ticking (*sensu* Graeber, 2018).

A second dominant theme was a sense of struggle for legitimacy and resources, although I did not know what those terms meant at the time. I could see that environmental scientists and ecologists had relatively low status in my workplaces. Environmental scientists and ecologists also dealt with low value information that had little impact on decision making (arguably most scientific information is also lower status). The language used by upper management to make important decisions seemed to come primarily from financial accounting, and environmental

information did not translate well into accounting information. In both organizations, the units I worked in started with lower levels of organizational resources and found it difficult to acquire more.

In both organizations, my work progress was trivially related to the intellectual and environmental resource management skills and theory that were the focus of my education. I, like most other environmental studies students had been following a popular, seemingly self-evident logic: I would go to school to learn skills and knowledge, go to work to apply those skills, and somehow, I would contribute to environmental conservation. The logic was even made explicit in the schools' marketing materials, which promised to teach the applied, practical skills demanded by the real world *and* make a positive difference in the world. The logic failed to match my experience. My experience was that the ability of an environmental scientist to do their job depended on integrating with and changing their organizational context, starting from a position low down on the organizational hierarchy. My education had completely neglected the organizational context in which I would be working. Changing the organizational context was something I did not know anything about or even how to think about.

Like many environmental scientists before me, I believed in the potential of good information. I subscribed to the rationalistic myth that people and organizations would change based on good information. I knew that people were largely irrational, but I implicitly believed the challenge was to provide better information in a better framework. During my undergraduate degree, the adaptive resource management literature—for example, Walters and Holling (1990)—had resonated with me. At a superficial level, adaptive management involves some variation of iterative phases of planning, doing, monitoring, and learning. The monitoring phase was foundational to further calibration and change. My brain could not conceive of any other basis for change. Applying this model to organizational change, the monitoring phase is analogous to sustainability reporting. People were using sustainability reporting for exactly this purpose and conceiving of it in similar terms—as an empirical basis for further calibration—so it was a natural starting point to explore organizational change.

1.2 My introduction to organizational change methods and struggles with this PhD

Reading and writing have been the dominant themes of this PhD. My interest and enjoyment in reading about sustainability precedes this PhD. Some of these readings have shaped my values, my life choices, even how I perceive myself and my world. I think this is common among people who are into sustainability. The other literatures that formed a part of this PhD (if not necessarily this dissertation)—linguistics, organizational change and broader organizational research, performance management, and to a lesser extent, psychology, accounting, and sustainability reporting—had not significantly shaped my life. I also spoke with *sustainability entrepreneurs* at higher education institutions across the Prairie Provinces. *Sustainability entrepreneur* is a term I made up to mean someone who champions sustainability in an organizational context and in doing so, tries to engage with its institutions. I explain its origins in the institutional work literature in chapter 4. The conversations with the sustainability entrepreneurs formed the foundation of chapters 2 and 5. However, in terms of life energy, my methods largely consisted of reading a lot and toiling over a little writing.

The theme of this PhD has been struggling to write. After coding the transcripts, I had a set of somewhat disconnected themes. My biggest personal struggle was turning those somewhat disconnected themes into a coherent narrative. To impose coherence, I had to move up the inference ladder, spinning an inferential web by reading the literature, introducing more theoretical concepts, and writing in more abstracted language. I recently looked at the reflections I had written immediately after having summarized and collated the themes, and quite dispiritingly, after all those extra years of struggle, I had not developed any new ideas. I actually had to remove what I thought were perfectly fine themes that did not fit into the larger narrative. The drive for coherence was driven by the sensemaking form, that is, the particular coherence I required was solely to meet the human need and scholarly demand for a coherent narrative; I'm not sure it has much epistemic value and it feels more akin to the requirement that mystery novels have neat endings. Neither the conversations I had, nor more broadly, the world of sustainability, are obligated to be coherent or conform to some conventions of academic sensemaking or the narrative form.

The second biggest theme of this PhD is reading. I read from many literatures, but I spent a lot of time reading organizational change theory. I've forgotten most of it, but I strongly feel that I read a lot of articles and books that I found unsatisfying. This was particularly the case for my comprehensive exam readings: as I had no background in the field, I relied heavily on citation rates and keyword matching in World of Science to compose my reading list. I was familiar with quantitative research and had learned about the five major qualitative traditions of Creswell (1998) but the majority of articles I was reading used neither qualitative nor quantitative methods. The reading list was composed disproportionately of essays and the most popular methods were reading and writing. Nothing is wrong with reading or writing but that they constituted the methods of so many of the highly cited articles I was reading was an indication that the balance of scholarship was tilted away from empirical research.

A related characteristic was the very high level of inference at which these essays were written. Many of the authors I was reading were not conducting empirical research themselves and only lightly citing empirical research, if at all. They primarily cited each other, creating a dense citation network but one with little empirical calibration. In Buddhist meditation, daydreaming is thought unconstrained by experience. While reading many articles, I repeatedly wondered how they were being constrained. "Theories must have empirical consequences;" theories are most impactful when performing an integrative function, part of which is integrating experiencing and sensemaking (Simonton, 2007, p. 36). When I came across the new institutional literature, I was quite appreciative not only of the high proportion of empirical research but of its integration with theorizing.

Both the predominance of the essay and theorizing at high levels of inference are related to the predominance of verbal understanding. Words—nouns in particular—were both the object and tools of study. Words were recursively used to define and understand each other to form a dense network of metaconcepts—of words with muddled referents. Naming is both a prerequisite and a major output of theorizing (Lawrence & Suddaby, 2006) and academic prose has an

exceptionally high frequency of nouns (Biber, 2006). Perhaps nouns are fundamental to the Western intellectual tradition. I struggled though with such a heavy reliance on them.

Another academic norm that made my reading less enjoyable is the effort to distil one's writing into a five second takeaway and repeat that takeaway as many times as possible so that one can read a few pages of a 200-page book and not miss anything. For some reason, I appreciated the opposite approach of Tor Hernes, a prolific writer with an interesting stream of consciousness writing style. He did not provide easy, one sentence definitions, which was annoying to a new student who was searching for exactly that. What is organizational change? What is an organization? That was for the reader to figure out!

McGilchrist's (2018) criticism of literary criticism helped make sense of my experiences. His central argument was that criticism was over-reliant on explicit verbal abstraction. When one engages with a piece of art—even an entirely verbal piece such as poetry—the most important part of our experience is non-verbal. When we try to reduce that experience to verbal abstractions, we lose the essence of our experience. Therefore, the value of reading a piece is not in facts you can articulate after reading it but in the process of engaging with it. Reading like this is a form of implicit learning (learning that is not deliberate and we don't know what was learnt) (Reber, 1993). Organizational change theorizing and literary criticism clearly have differences, but this criticism resonated with me and my struggle to engage with this style of scholarship.

McGilchrist (2018, 2019) linked this style of scholarship to cognitive processes that are also visible at social scales. All living neural networks are lateralized and the human brain particularly so. Our brains have separate sensemaking, experiential, and reality-testing modules. For example, the left hemisphere prioritizes familiar information, neglects information that does not fit its schema, and has a low capacity to shift frames or think flexibly. The right hemisphere can process novel experiences that do not fit a rigid schema and modify those schema, that is, it is more involved in calibration and learning. The right hemisphere is therefore heavily involved in learning through experiential surprise and the resulting recalibration of our sensemaking. However, the left hemisphere comes to dominate because it is highly confident and self-referential. Unfortunately, because the left hemisphere is generally poor at experiencing novelty and incapable of reality-testing, the sensemaking deteriorates as the environment changes. McGilchrist (2018, 2019) applied this schema to academia and other social systems that are characterized by left hemisphere dominance. One could arrive at the same conclusion through the extended mind literature (Clark, 2011; Paul, 2021): using our individual brains to understand complex, abstract phenomena is a weak method. It is more effective to use as many extra-neural resources (outside the brain) as possible. Words are of course partly extra-neural tools. But the more we charge those words with meaning from the environment, the more effective they will be.

It is now impossible for me to look at my organizational change reading without seeing these left hemisphere characteristics. By focussing on high levels of abstraction and neglecting empirical calibration, the fields dominating my reading list had precluded experiential surprise and the possibility of insight. In more institutional terms, the scholarship focussed on what would allow its own reproduction. Most of the articles I read applied a pre-existing schema to a 'novel'

metaconceptual terrain. Because the conclusions were already predicted by the schema, surprise and insight were rare. All the ideas I've encountered are old ideas. As I write this, I am struggling to think of a 'new' idea I've come across that cannot be traced back decades. I found it quite amusing that process theory is the "latest and greatest" organizational change theory. Many core ideas can be found in Whitehead (1929/1978), who famously wrote that "The safest general characterization of the European philosophical tradition is that it consists of a series of footnotes to Plato" (p. 39).

Old ideas are not necessarily inferior; I chose to base this dissertation on 40-year-old institutional articles because they resonated with me most. The methods that seemingly predominate Western academic approaches to organizational change (reading, writing, and verbal reasoning) are essentially unchanged over 2000 years, so 'new' insight will naturally be difficult. Old ideas are more problematic set against a preoccupation with novelty that seems prevalent in the field of theorizing. Norms of theorizing appear to devalue theorizing about things that have already been theorized about. Even when ideas can be traced back several decades, words like 'new' and 'contribution' frequently co-occur. Fascination with novelty is perhaps part of a broader trend in academia. Use of the terms *novel*, *innovative*, and *unprecedented* in PubMed abstracts between 1974 and 2014 have increased 2500% to 15000%, potentially indicating the emergence of an academic culture that focuses on marketability over nuance (Vinkers et al., 2015). I do not know the cause of this fascination, but I found the impacts on my reading experience to be largely negative. For example, I frequently found that when an old idea was applied to a new metaconceptual terrain, the old idea had a new label, ignoring and devaluing the old idea and its scholarship; I would have preferred to see the lineage of the idea and how the old idea connected to the new terrain, which would value the old idea, more generously attribute the idea to older scholarship, and contextualize current scholarship. In my own case, after all the intellectual sweat I've put into this PhD, I doubt that I've come up with any novel or surprising ideas. I can easily imagine sharing the major findings of this dissertation—for example, about how organizations are full of bullshit and that makes change difficult—with someone who has never heard of institutionalism and being greeted with shock that I would study something that they learned when they first started their job. This PhD has not yielded a novel five second takeaway but it has enabled a somewhat intellectually satisfying framework to explore human interactions in organizations. I don't know that the absence of novelty necessarily devalues this PhD but I do feel that this tension is somewhat intrinsic to the norms I have been observing.

The argument for novelty is one that theorists regularly make: because people have experienced so many changes in their worklife, we need new concepts. The issue is how well organizational theorists have captured these newer experiences of worklife. It can easily be argued that organizational theory does not capture these new trends and the reason it fails is because it is so insular and insufficiently grounded in the experiences of daily work (Barley & Kunda, 2001). Collecting and analyzing data about workers is a multi-billion dollar industry; empirical data about worklife are everywhere. However, the consulting literature and the academic literature minimally overlap, focussing not only on different fads but using different methods: the consulting literature is minimally theorized, and the theoretical literature that I read made minimal use of consulting data to better ground itself. One empirical trend that I consider

undertheorized and relevant to the experiences of sustainability entrepreneurs is the prevalence of misery and meaningless in worklife, which can be labelled *bullshit*.

The pervasiveness of bullshit in daily worklife has been evidenced by millions of responses gathered in numerous empirical studies. 84% of employees were ‘just going through the motions’ at work (Hayes et al., 2018); 15% were actively disengaged (Aon, 2017; Gallup, 2017). These large studies actually overestimated engagement because they included first year workers who have exceptionally high engagement that inflated the estimate (Hayes & Buckingham, 2020). In fact, the longer the length of service, the less engaged workers become (Hayes & Buckingham, 2020). Less than 8% of individual contributors (i.e., not management or executive) were engaged (Hayes & Buckingham, 2020). This workplace misery is a major issue: never mind maximizing human potential, work is destroying human lives. Bullshit and other workplace psychosocial factors (a construct that includes factors such as low fairness, high job demands, and low control), would cumulatively represent the fifth largest cause of mortality in the United States (Goh et al., 2015a, 2015b, 2016). Bullshit is a major issue but there is a large gap between academic and consulting research. The large consultancies gathering the data typically do not cite academic theory in their public reports. David Graeber (2013, 2018) was arguably the first theorist to label meaningless, pretentious work as *bullshit*, and not only did he not cite any of these large empirical studies, he did not cite any organizational theory either (he came from outside the organizational research tradition). The biggest culprit in the rise of bullshit is perhaps performance management and other related managerial controls. Sustainability reporting is from that same family of controls. There is a significant risk that sustainability reporting is just bullshit; sustainability entrepreneurs relayed how much easier it would be to reduce the sustainability reporting process to a box ticking exercise, as many other higher education institutions had done. However, the opposite is possible. With sufficient trust, communication, and collaboration between sustainability entrepreneurs and non-sustainability professionals, sustainability reporting could provide a framework for non-sustainability professionals to achieve personally and professionally meaningful goals.

I have largely tried to conform to the academic norms of the fields in which I wrote. Words are an important part of the linguistics and organizational change scholarship, although in different ways. A lot of the institutions related to organizational scholarship relate to words, whereas linguistics tries to make some of them explicit objects of study. I have written an entirely verbal thesis, centering academic nouns, Chapter 2 explicitly so. I have tried to draw from linguistics to better understand the relationship between semantics and social processes. Chapter 1 and 6 are written in a style that more reflects my voice. Chapters 2—5 are written in a style that conforms more to conventional academic prose, a style that I generally find unenjoyable to read and write.

1.3 Chapter 2: Linguistics and sustainability

Sustainability is a metaconcept with many possible senses. In Chapter 2, I discuss some of those senses. This chapter arose primarily from me asking sustainability entrepreneurs at the beginning of each conversation, “How do you define sustainability?” I asked this question because committee member Janet McVittie said I needed to establish a frame of reference for the conversation. I did not agree but I asked the question anyway. Defining sustainability has been a

big part of the intellectual culture of sustainability. Most sustainability entrepreneurs had thought long and deeply about what sustainability meant to them. Most had also been involved in developing a sustainability definition for their organization, which involved multiple considerations besides their own individual perspectives. The sustainability entrepreneurs generally enjoyed sharing their thoughts about sustainability and I enjoyed listening and querying them. I ended up with a lot of material on the meaning of sustainability. As I was coding the transcripts, I tried but was not quite successful in making sense of the variation in definitions. Meaning and its variation are the province of linguistics—not the sole province—but it has the most developed tools and concepts to understand semantic phenomena. So, I read the semantics literature until I thought I understood how basic semantic concepts operated on the senses of sustainability documented in the conversations. I had never ‘done’ linguistics before, and I did not know of any study of *sustainability* grounded in semantics through which I could corroborate my interpretation or use to base my study, so this was a novel experience for me. I can also say categorically that this was the only part of this dissertation that I enjoyed writing, partly because my writing strategy was simply to pursue my curiosity, partly because I felt like I was figuring something out (as opposed to post-hoc rationalization), and partly because the chapter filled a glaring and personally annoying gap in current *sustainability* scholarship, which largely focuses on denotation and neglects other semantic and communication considerations.

Chapter 2 ‘defines the term’ of this dissertation—sustainability—and it also explores what it means to ‘define the term.’ Defining terms is important, or at least prevalent, in the social sciences because there is so little consensus about what any term means. Debating what terms mean is a central characteristic of the social sciences (Simonton, 2004). Developing specific denotations presumably provides a common framework through which to read a text and thereby maximize effective communication. The underlying logic seems rational and self-evident: define your terms so people know what you are talking about. The logic is a testable knowledge claim. I am not aware of empirical testing of the logic’s validity, but I have my doubts. My own experience of the research literature is that scholars can have vehement disagreements based on misunderstanding each others’ terms, despite the prevalence of carefully crafted denotation throughout their texts. I have observed the same definitional disagreements in disciplines that rely more heavily on non-ambiguous, widely accepted, even formulaic definitions, although the misunderstandings frequently arise from unwittingly conflating different components of the definition, for example, concepts for measures (surrogation), reference conditions, or thresholds. The scholarly focus on denotation might or might not be necessary for effective communication, but I suspect it is not sufficient. Words are continually evolving and have infinite shades of meaning, given colour by specific interactions and contexts (McWhorter, 2016). Chapter 2 looks at this general phenomenon of finding meaning through a linguistics lens. Linguistics has developed concepts for understanding the dynamism and variation of language, and how people are able to communicate despite those characteristics. Meaning is evidently partly denotative, but it is also interactive and intersubjective. Recognizing the intersubjective dimension of meaning means exploring the meaning of sustainability in ways other than our own individual searches for the ideal definition. The practice of sustainability professionals sometimes includes tentative, preliminary engagement with the intersubjectivity of meaning.

My aim for Chapter 2 is less a long dictionary style list of a bunch of senses—although that is a big part of this chapter—and more an illustration of how understanding word meaning depends on context. Semantic and social processes are intertwined in the development of specific senses of *sustainability*. The different senses reflect how sustainability entrepreneurs communicate in different social and organizational contexts to achieve their individual and collective goals. More broadly, they illustrate how people use words to cope with uncertainty, and simultaneously understand and navigate the world.

1.4 Chapter 3: My search for the organizational research literature

I review the ‘sustainability reporting in higher education’ literature in Chapter 3. My broad objective was to survey the scholarship on sustainability reporting in higher education. The ‘sustainability reporting in higher education literature’ was not a coherent, cohesive literature, but rather a collection of articles that met my search criteria for sustainability reporting in higher education. These articles were quite isolated, with little integration of the sustainability reporting, performance management, accounting, or environmental management system literatures, the practice of sustainability reporting, or even other articles that met my search criteria. One of my specific interests was to find out which methods and frameworks scholars were using; I hoped to use the findings to guide my own studies. I found that most scholars did not explicitly talk about their methods. My primary specific interest was to see how the literature engaged with organizational change. I found that the organizational research literature did not feature at all: while sustainability reporting was characterized as a concrete, discrete thing, with clear procedures and outputs, organizational change was treated as a black box. As this set of literature, while interesting, unfortunately did not serve my main interests, I had to expand my reading.

As I read outside the higher education literature, sustainability reporting and organizational change became less discrete ideas in my mind. I started with the most closely related literatures: corporate sustainability reporting, performance management, and accounting (the environmental management systems literature likely overlaps significantly but I did not get into it). I was also reading the organizational change literature. Most of these literatures dealt with non-observable concepts high up the inference ladder, a level at which it becomes more difficult to discriminate between sustainability reporting and organizational change. For example, how would one distinguish the multiple, related purposes of performance management (Behn, 2003) from the purposes of organizational change efforts?

1.5 Chapters 4 and 5: My introduction to institutional perspectives

During the past year with the clock ticking down on this PhD, I knew intellectually that I just needed to pick a lens—any lens—and write from that perspective, even if I found some aspects wanting. However, I still had trouble committing to a particular lens. The corporate sustainability reporting literature generally did not integrate much of the organizational change literature. One exception was Adams and McNicholas (2007) who used Lewin’s (1947) 3-Step Model, which is many people’s first stop in the organizational change literature (mine too). However, the performance management and critical accounting literatures frequently feature institutional perspectives. Institutional perspectives can be considered frameworks for theorizing about

organizational change, or at least certain forces of change and continuity. Some of the most enjoyable papers I read applied an institutional framing to performance management. The performance management literature—largely by including an institutional perspective—contextualized many of the sustainability reporting themes that I had been curious about.

I thought the performance management literature was so relevant that I would base Chapter 5 on it. Because many of the performance management articles I was reading cited early institutional literature, I started reading that too. I had come across the institutional literature early in my PhD but had not seen its relevance and did not get into it. On this second foray into the institutional literature though, I was able to appreciate its potential applicability to my wants. I decided to apply institutional framings to sustainability reporting myself, instead of indirectly through the performance management literature. I do not believe this was a critical decision as theory is generally indeterminate, if not completely substitutable. Institutionalism does not add any new or unique ideas. Some of the (not necessarily unique) characteristics I appreciated about institutionalism were:

- It could contextualize many of the themes that I wanted to highlight from the conversations
- It predicted the increasing institutionalization of organizational life and the pervasive pretence of rationality that legitimizes it, which make the modern organization so resistant to change
- It could frame the frustration and powerlessness that sustainability entrepreneurs frequently feel. I would not do justice to those conversations without touching on those feelings, even if I did not succeed in conveying them. The whole focus of institutionalism is on what prevents actors from effectively acting on their interests (DiMaggio, 1988).
- The early institutional literature has a relatively higher frequency of empirical studies
- Organizational behaviour is shaped by the environment, which is an evolutionary and systems perspective that aligns with how I naturally interpret the world (understanding a phenomenon through its context is not unique to institutional perspectives; for example, population ecology, which emerged contemporaneously, also explicitly considers the relationship between organization and environment, and I don't have convincing rationale for not choosing population ecology instead)
- Sustainability reporting could be viewed through an organizational change perspective
- It can contextualize some of what I consider to be the dominant (and related) features of organizational life: bullshit, purposelessness, misery, and decoupling
- It focuses on legitimacy, which I felt was one of the strongest themes from the conversations and could be a useful lens to view sustainability reporting

The institutional literature is not a comprehensive theory of organizational change. Like a lot of organizational change theories, it is focussed on broader scale processes, appropriate for looking at the sustainability report and how the report leads to some formal broader-scale change process. I wanted to centre the experiences of individual sustainability entrepreneurs.

While I was working at the Saskatchewan Watershed Authority, I read Westley (2002), a ‘micro-level perspective’ on a series of resource management challenges that “Evan,” a natural resource manager, had faced. Westley accurately captured the frustrations of working in an organizational context and this resonated more powerfully with me than any other paper in years. I sent the article to two co-workers with whom I was intellectually close. We gathered spontaneously in my office, laughing, smiling, trying to articulate our thoughts and emotions but not getting beyond “that was a good article.” Seeing Evan’s experiences in writing and having them resonate so closely with our experiences was emotionally moving for us. I recently reread the article—after having engaged with too much organizational research for any normal person—and I found that the theory—which was primarily an extension of complex adaptive systems to Evan’s experiences—did not much resonate with me. However, I still found the experience of reading it just as emotionally resonant. For me, this is an indication that I do not need good theory to find academic writing satisfying. I especially appreciated the ‘micro-level perspective.’ I think it facilitated a stronger emotional connection to the story and was also a helpful frame for thinking about organizational change. The experiences of individuals are more observable and more comprehensible to me. They were also underrepresented in the literatures I was reading.

The purpose of Chapter 4 is to help the reader through Chapter 5 by introducing the main theoretical lenses I used. In section 4.1, I outline a few major ideas from institutionalism. In section 4.2, I outline a few major ideas from institutional work. The institutional work literature arose from institutionalism. Institutional work has multiple synonyms and different senses, but the general focus is on agency. Like institutionalism, much of its focus has also been on broader scale processes. However, it provides a framework that allowed me to contextualize some of the finer-scale processes of interest to me.

In Chapter 5, I contextualized the experiences of sustainability entrepreneurs with sustainability reporting using institutional perspectives. Sustainability reporting can provide legitimacy for sustainability initiatives; whether it can do anything more depends on the institutional skills of sustainability entrepreneurs. I discuss how sustainability reporting, even just as a box-ticking exercise, can still yield legitimacy benefits for the higher education institution. This approach assumes the value of sustainability reporting rests on the outcome. This is the traditional academic focus and perhaps reflects a common implicit logic: the report is completed, the organization rationally processes that information, and then rationally initiates formal organizational change processes that will improve sustainability performance. I focus on the individual experiences of sustainability entrepreneurs as they use the process of sustainability reporting to engage with their institutions.

1.6 Notes

1.6.1. A note on ethics

I completed the mandatory Ethical Conduct for Research Involving Humans Course on Research Ethics.

1.6.2. A note on abbreviations

A common writing convention is to write the full term and then use abbreviations for all subsequent instances. I did not observe this convention. Many people have difficulty with

discipline-specific abbreviations, so I frequently spelled those words out to practice more accessible writing.

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2 Senses of sustainability: exploring the definition of sustainability

2.1 Abstract

Purposes: To understand how the term *sustainability* is used by sustainability entrepreneurs in higher education institutions in the Canadian Prairies. Secondly, to integrate the linguistics literature and to label linguistic phenomena.

Approach: I spoke with 20 sustainability entrepreneurs at higher education institutions about how they defined *sustainability* to document senses in use. Given the prevalence of the practice in the sustainability community to uniquely define *sustainability* for oneself, and the resultant diversity of senses, I adopted a semasiological approach. I read sustainability and linguistics literature to organize and contextualize those senses.

Findings: Sustainability entrepreneurs typically reflect deeply about sustainability and its many dimensions. They use sustainability in multiple, distinct senses. These senses emerged not only from personal reflection but through collective sensemaking. Some of the senses reflect the efforts of institutional entrepreneurs to communicate effectively and influence others in their organizational and social contexts.

Limitations: I spoke with a small set of sustainability entrepreneurs; variation in meaning within this community does not fully capture, nor is it representative of the full variation in meaning of *sustainability*. I did not look at how variation in the form *sustainability* related to variation in other forms.

Implications: Sustainability education frequently involves individual reflection to develop a personal, static definition of sustainability. An alternative linguistics approach can help to understand how senses of sustainability evolve over time and in interactions with others to develop shared meaning. Linguistics can help to broaden the discussion about the meaning of sustainability beyond ideal definitions to a more empirically grounded, richer understanding of communication.

Keywords: sustainability, institutional entrepreneurs, semantics, polysemy, organizational change, Canadian Prairies

2.2 Introduction

Defining sustainability appears to be part of the scholarship and practice of sustainability. More than 300 definitions have been proposed in the literature (Johnston et al., 2007). Students are

encouraged to define sustainability in their sustainability classes. Individual scholars and practitioners frequently develop unique definitions of sustainability for themselves after reading widely and reflecting deeply. Organizations frequently develop their own sustainability definitions after lengthy consultation processes. Grounding definitions in personal or organizational contexts is in contrast to most professional registers, which seek to standardize word usage (Engberg, 2006). Sustainability scholars have also pointed out the limitations of using a definitional approach with such an inherently complex and pluralistic idea, for example, Clifton (2010) and Dobson (1996). More strongly, Kidd (1992) argued that such a search is misguided. These scholars have instead tried to make sense of the variety of approaches to sustainability using classification systems (Clifton, 2010; Dobson, 1996) and evolutionary trees (Kidd, 1992).

My approach here is to document *sustainability* usage in a particular professional context. I accept Kidd's (1992) central argument that *sustainability* has many contradictory, equally legitimate roots, with none better than any other. I document the senses in which *sustainability* is used and link them to traditional *sustainability* roots and to additional literature for senses that are not part of that tradition. Part of understanding the history of a field is to understand its words and their usage in particular social and historical contexts (Mills, 1989). Much of the *sustainability* scholarship has justifiably focused on how *sustainability* is defined by other scholars. I focus here on how—perhaps to better understand and shape their environment—*sustainability* is used by a particular group: sustainability entrepreneurs in higher education institutions. The *institutional entrepreneur* is a term from the institutional work literature that can be used to describe people who engage with organizational change; by *sustainability entrepreneur*, I mean someone who engages with organizational change towards sustainability. Sustainability entrepreneurs have a potentially interesting perspective on *sustainability*. Their daily experience involves thinking and talking about sustainability, so they have had many opportunities to develop their understanding of sustainability. Although they are likely well-grounded in the sustainability scholarship, it is not their only frame of reference, or even necessarily their primary frame. A fundamental part of their job is to speak about sustainability with people who hold a wide range of attitudes and knowledge about sustainability, including people who know little about sustainability and even people with antipathetic sensibilities. To communicate effectively with different audiences in different contexts requires them to not just translate sustainability concepts to non-specialized speech but to think and talk about sustainability in multiple ways.

I contextualize their senses of sustainability through the linguistics and sustainability literatures. Although the meaning of *sustainability* has received considerable attention from sustainability scholars, few have used linguistics to help them understand it. Two of them include Brown (2015) and Lakoff (2010). Brown (2015)—building on the works of Ernesto Laclau—discussed sustainability as an empty signifier. An empty signifier is a term that has little to no denotative value but expresses something universally appealing; it can be a fundamental tool for democratic, political action (Laclau, 2018). Lakoff (2010), argued that the belief—common among many environmentalists—that facts and reason can persuade others of the severity and

urgency of the environmental crisis is false. He proposed that environmentalists can more effectively communicate using people's unconscious, emotional, and physical frames.

The meaning of sustainability is a linguistic phenomenon; linguistics tools and concepts can help to understand it. Much of the 'what does sustainability mean' literature can be said to adopt an implicitly positivistic approach, assuming a direct relationship between sustainability and its referent. I examine this relationship to show how sustainability entrepreneurs juggle multiple mental models of the world to more effectively champion sustainability.

2.3 Methods

To understand the meaning of *sustainability*, I took a semasiological approach (*sensu* Traugott (2006)), in which I look at variation in the senses associated with a given form. Semasiological variation (or polysemy) does not require distinct referents, just systematic variation (Glynn, 2014). I do not argue that these senses have become coded; this argument is unnecessary because form and function are normally in flux (McWhorter, 2016) and because all that is necessary to justify this approach is some degree of semanticization in a speech community, or from a quantitative perspective, some degree of prevalence or systematic usage (Glynn, 2014).

I asked sustainability entrepreneurs how they defined *sustainability*, coded and classified their responses, and then contextualized them through linguistics and sustainability literature. When *sustainability* is italicized, I mean "the form sustainability."

2.3.1 Conversations

2.3.1.1 Participants

I held conversations with 20 sustainability entrepreneurs from eight higher education institutions across Alberta, Saskatchewan, and Manitoba. The primary selection criterion was willingness to participate. I identified them as sustainability champions in a number of ways: a job title with the word *sustainability* in it; referral, for example, someone told me that they were a campus sustainability champion; or direct knowledge of their work. Twelve participants were professional staff and eight were professors.

2.3.1.2 Conversations

All conversations took place in person, except one by phone. Most conversations took place on campus, but some were at the sustainability entrepreneur's home or in public spaces. The conversations were held in the summer and fall of 2016. Interview duration averaged 1.5 h \pm 0.5 h. At the formal start of each conversation, that is, the first question on the conversation guide, I asked each sustainability entrepreneur what their personal definition of sustainability was. They provided a short definition that was always followed by a lengthier discussion. They frequently expanded on themes throughout the subsequent conversation.

2.3.1.3 Transcription

I transcribed from the recordings of each conversation. Defining the bounds of speech is largely arbitrary and guided by convenience. I document some of those choices below. I first transcribed everything that I could hear and make sense of. I then edited the transcription for increased clarity. The most frequent style decisions are below. I did not perfectly adhere to these guidelines and there are many exceptions to all of them.

In general, I did not transcribe:

- pauses, filled pauses, or partial words
- changes in vocal quality, for example tempo, volume, or pitch. However, I did use exclamation points, if I felt they captured some of the flavour of the utterance, and I frequently italicized words that the speaker emphasized, either through elongation, pauses, or volume changes.
- non-lexical phenomena, for example, gestures or facial expressions

After transcribing the conversation, I then edited it twice to reflect the conversation as best as I was able:

- I added punctuation
- I removed false starts (phrases of a few words that didn't connect to the subsequent phrase), repeated words, and truncated words
- I did not add words

2.3.1.4 Analysis

After completing the transcriptions, I coded responses into different senses of sustainability. I iteratively revised the codes as I reread the transcriptions and as I contextualized them in the literature.

2.3.2 Reading

The articles I read ranged from purely scholarly attempts to define and/or classify sustainability, for example, Clifton (2010), to seminal non-academic articles, for example, Nordhaus and Shellenberger (2004). The selection of articles was entirely non-systematic and more a reflection of how the thinking of sustainability entrepreneurs would trigger connections with my personal reading. Reading is not normally explicitly included as a method; however, reading constituted the vast majority of the time spent on this PhD journey and appeared to be the primary sensemaking method of the majority of the articles I read.

2.4 Findings

In this section, I discuss the multiple senses of the form *sustainability* that sustainability entrepreneurs discussed. Some senses are more traditionally denotative, while others are more connotative and show how *sustainability* has evolved.

All but one sustainability entrepreneur used the form *sustainability* (this entrepreneur used the compound form *sustainable development* because of its more frequent use globally). Broadly, I consider *sustainability* and *sustainable development* to share sufficient variation that much, but not all, of what I write about *sustainability* in the discussion below is also relevant for *sustainable development*.

All sustainability entrepreneurs defined *sustainability* in multiple ways. Sustainability entrepreneurs would typically share one brief initial definition before discussing other aspects of sustainability, captured by the major themes discussed below. They occasionally returned to the subject of the meaning of sustainability later in the conversation. Although they occasionally explicitly labelled their definition, for example, “the Brundtland Report definition,” more frequently, they did not. They often discussed how much they had thought about the meaning of *sustainability*, sometimes in terms of struggle. Their definitions and insights demonstrated the richness of their understandings and the sincerity and thoughtfulness with which they had reflected on the many meanings of sustainability.

The subsections below present the categorized responses of sustainability entrepreneurs and contextualize those categorizations.

2.4.1 *Three pillars*

No sustainability entrepreneur used the most popular version of the three pillars definition (Barbier, 1987), in which all three pillars are equal. All sustainability entrepreneurs used the three terms—environmental, social, economic—in discussing their definition but modified the pillars metaphor or expressed reservations about it. Many felt that the idea that all three pillars were equal was problematic and that the environmental and social pillars required more attention, for example, “Environmental and social are two of the areas I focus on the most. I think our economic systems tend to live within those other two.” One said more strongly, “I really object to the idea of pillars... it justifies trade-offs where I don’t think trade-offs are allowed anymore.” Another idea that many felt was perhaps not captured by the three pillars metaphor or required explicit clarification was the interconnectedness of the pillars, for example, “really understanding the interplay between the three pillars of sustainability,” and “it’s all interwoven, it’s so holistic.”

The first scholarly publication representing sustainability as three pillars might have been Barbier (1987). Barbier described development as the interaction of economic, social, and environmental systems and took credit for their graphical representation as a Venn diagram of three intersecting circles (Purvis et al., 2019). The three pillars representation of sustainability has become ubiquitous (Purvis et al., 2019) and is perhaps the most widespread definition of sustainability in higher education policy (McKenzie et al., 2017).

2.4.2 *Intergenerational*

All sustainability entrepreneurs discussed how important the intergenerational aspect of sustainability was. Some sustainability entrepreneurs directly referenced the Brundtland Report definition (“the ability to make development sustainable—to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs” (World Commission on Environment and Development, 1987)) or provided a similar definition, for example, “living and working and building our societies in a way that... leaves it in such a way that others can use it in the future and that our planet can continue to sustain itself into the future. And from a societal standpoint, that we can continue to thrive as a species allowing other species to thrive at the same time” or “enough for all forever.” The Brundtland definition, based on the

frequency of its use and citation, was at one time the standard definition of sustainability (Kates & et al., 2005).

Sustainability entrepreneurs typically followed the intergenerational definition with a more expansive definition that encompassed other aspects of sustainability. One entrepreneur combined the three pillars and intergenerational ideas in their definition as, “looking at social, ecological, and economic balance for society in perpetuity.”

2.4.3 *Flourishing and positive change*

Many sustainability entrepreneurs understood sustainability in terms of human flourishing. For example, “Sustainable development focuses on building up the various capital stocks where capital is restructured in a way that focuses not on simply monetary outcomes but that holistic basket of outcomes dealing with wellbeing, quality of life” and, “an aspirational process of moving towards that in a just way and in a way that more fully realizes the most human and humane values that we possess.” The Rio Summit’s first principle was that “Human beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature” (United Nations, 1992, p. 3). Human flourishing has been part of a wide range of environmental thinking, including agrarian philosophy (Berry, 1983), ecological economics (Daly & Cobb, 1994), and the original 1972 definitions of Goldsmith et al. (1972), Meadows et al. (1972), and International Union for Conservation of Nature and Natural Resources (1973) discussed below.

The sustainability entrepreneurs who understood sustainability in terms of human flourishing always linked sustainability to an appreciative or strength-based change perspective, for example, “I always take a strength-based or capacity-based approach” and, “growing opportunities to have both a good today and a good tomorrow... focussed on what you can do by changing systems and the opportunities for better quality of life that come from that.” Appreciative inquiry was one of the most important innovations in the field of organizational development; arguably none have occurred since (Burke, 2011). Even if not explicitly part of their sustainability definition, all sustainability entrepreneurs expressed throughout the conversation how appreciative inquiry fundamentally shaped how they performed their jobs. Although ‘human flourishing’ is an old sense of *sustainability*, applying an appreciative lens to institutional sustainability work seems to be a newer sense. It is not reflected at all in the comprehensive sustainability typology of Clifton (2010).

The origin of this appreciative sense of sustainability might not be through development or environment discourses but through the convergence of organizational fads (Abrahamson, 1991; Abrahamson & Fairchild, 1999). Adopting a positive or appreciative stance has pervaded many fields, from leadership (Gardner et al., 2005) to work counselling (Owens et al., 2019) and organizational studies (Cameron et al., 2003; Cameron & McNaughtan, 2014). Even a stereotypically problem-focussed process such as Lean (Shook, 2010) has incorporated strength-based practices, as in Shaked (2013). In this interpretation, any organizational change initiative, including sustainability, is likely to reflect popular organizational change practices. Similar ideas were also diffusing through multiple fields outside organizational research, for example, in

positive psychology, sustainability characteristics were mapped to pro-social, inherently desirable characteristics (De Young, 1996). The positive or appreciative stance is quite popular.

2.4.4 *Procedural justice*

One sustainability entrepreneur expressed how *sustainability* was about “pursuing as a very central goal, a just, participatory, and sustainable society.” Participation is related to procedural justice elements such as voice and influence in the typology of Thibaut and Walker (1975) or representativeness and selection of decision makers in the typology of Leventhal (1980). This sustainability entrepreneur thought participation was key to understanding the critique of the environmental movement as being overly focused on biodiversity conservation at the expense of the global poor. According to this entrepreneur, the underrepresentation of the global poor in sustainability discourse has led to an unbalanced understanding of sustainability: “The notion of sustainability is actually not one of conservation, it’s one of change... the transformative aspect of sustainability has been neglected [by conservationists] and the [needed] transformation is in the economic and the social pillars... we preserve the environment by changing the way we relate to each other.”

No one else included procedural justice in their definition of sustainability. However, distributive justice was a central, if not explicit, concern for most of the sustainability entrepreneurs. Distributive justice was typically expressed through the idea of expanding our moral sphere of concern, for example, to future generations and other species.

2.4.5 *Unnamed understanding*

The senses of *sustainability* identified above by the sustainability entrepreneurs have of course been focussed on the phenomena that people have named *sustainability*. However, there is an unnamed component, particularly historically. One sustainability entrepreneur discussed this sense they felt at the start of their career when *sustainability* was not widely used: “Maybe there was a gut feeling or an understanding of something that we didn’t really define, we just sensed this is where we’re going... there seemed to be a certain worldview that was out there that a lot of us were tapping into or expressing without maybe talking a lot about its definition.” Speaking of a colleague who emphasized the direct experiential quality of sustainability (over intellectual theory) and featured food in her teaching, “And her approach was not to argue or to define but to cook it and give it to you to eat!... ‘What do you think now? Taste it!’”

This sense of an unnamed understanding is reflected in writing (in the English language intellectual tradition) from the 17th through 19th centuries that discussed environmental degradation from overconsumption of natural resources but did not label the degradation with a single term (Du Pisani, 2006). Although these writers were clear about their understanding of the ideas, they had not come up with a single term to describe them. During the 17th through 19th centuries, documented senses of the form *sustainable* had to do with ‘capable of being endured’ or ‘defensibility of an argument’ and were unrelated to environmental degradation (Oxford English Dictionary, 2021).

The unnamed aspect of *sustainability* is also evident in what some sustainability scholars consider the first written occurrences in 1972 of modern senses of sustainability. The first

occurrence of the modern sense of *sustainability* is typically traced (by for example, Du Pisani, 2006; Kidd, 1992) to the January special issue of *The Ecologist* called *A Blueprint for Survival* (Goldsmith et al., 1972). This special issue was an explicit call to action prior to the 1972 United Nations Conference on the Human Environment (“Stockholm Conference”). The call to action included defining an ideal: “Our task is to create a society which is *sustainable* and which will give the fullest possible satisfaction to its members” (p. 6). A few months later, *The Limits to Growth* concluded: “It is possible to alter these growth trends and to establish a condition of ecological and economic stability that is sustainable far into the future. The state of global equilibrium could be designed so that the basic material needs of each person on earth are satisfied and each person has an equal opportunity to realize his individual human potential” (Meadows et al., 1972, p. 24). The IUCN 1972 Yearbook (International Union for Conservation of Nature and Natural Resources, 1973) took a similar approach, defining environmental conservation as managing environmental resources towards achieving “the highest sustainable quality of human life” (p. 5). In these three occurrences, *sustainability* is still unnamed. Only later did *sustainability* come to mean the definitions it was part of. This is a form of connotation called collocative meaning, where a word reflects the meanings of the words it frequently occurs with (Leech, 1974/1985). They are also examples of emotional connotation. All three groups of authors were motivated largely by negative emotions, for example, concern and fear about impending environmental collapse. However, they all strategically framed their central idea positively, in terms of quality of life, human potential, or satisfaction. Interestingly, the secretary general of the Stockholm Conference that summer took the same approach to reconciling competing environmental protection and economic development interests: focusing on the definition of *development* as a major outcome of the conference, and defining it in such a way that it meant both competing interests (Strong, 2000).

These three occurrences also show *sustainability* as an innovation (*sensu* Croft, 2000) in that it integrated an old form (*sustainable*) and an emotionally positive current sense (‘avoiding environmental collapse/human thriving’) through a semantic shift to create something that sustainability advocates could use to communicate their ideas.

2.4.6 *Semantic change and evaluation*

Many sustainability entrepreneurs expressed how the meaning of *sustainability* had changed over time and had developed a negative association for them. One said, “I hate the word sustainability. I hate it! It’s the worst... the word has lost all meaning.” Another said, “I don’t define sustainability ... I try not to use the word much myself because I think it has too many meanings for too many people... I don’t find it specific or useful enough anymore. It may once have been, but everybody says they’re sustainable now.” They continued, “It’s just like, ‘it’s a sunny day.’ I need more info to work with.”

One aspect of this change is generalization (Blank, 1999) or broadening (Traugott, 2006). Broadening can be defined as the meaning of a word shifting upward in a taxonomy (Blank, 1999) or, alternatively, as an increase in the senses of a form (Hopper & Traugott, 1993/2003). In a taxonomic system, a lower level is an instance of the next higher level, for example, a tree is a type of plant. Below, I use the symbol ‘>’ to mean that the words on the left of it are assigned the

new meaning in single quotes on the right (i.e., *sustainability* as ‘old meaning’ > ‘new meaning’):

sustainability as ‘environmental conservation’ >

‘environmental conservation, global justice, intergenerational justice, economic growth, participatory democracy, ecological interconnectedness, etc.’ >

‘anything good and long-lasting.’

The opposite downward shift in taxonomy was also observed, which is called narrowing. For example, one entrepreneur said, “often people hear sustainability, and they think composting and recycling and energy, and they don’t think about any of the social issues, they don’t think about the full scope of what sustainability means.” Another entrepreneur lamented a narrowing to a different ‘pillar’: “some people talk about sustainability and what they mean is organizational sustainability... we end up doing all this cutting within the structure to sustain the organization.”

sustainability as ‘the interconnections between, for example, environmental conservation, global justice, social justice, and quality of life’ > ‘the financial health of an organization.’

These comments by sustainability entrepreneurs about, for example, hating *sustainability* or not using *sustainability* because of its ambiguity, also demonstrate that sustainability has taken on a negative valence for some sustainability advocates. These criticisms of *sustainability* can be found in the literature starting in at least the 1990s, concomitant with the increasing usage of the Brundtland Report definition (de la Court, 1991; Lélé, 1991; Richardson, 1994; The Ecologist, 1993) and still continued over a decade later (Johnston et al., 2007; Tulloch, 2013; Tulloch & Neilson, 2014). These criticisms all took aim at *sustainability*’s ambiguity and fuzziness; at best *sustainability* meant everything and nothing, and at worst could smuggle undesirable ideas into the discussion. From a scholarly perspective, *sustainability* needed to be coherently and rigorously defined to be useful (Lélé, 1991), ideally with measurable evaluation criteria (Brooks, 1992, cited in Jacobs, 1999). AtKisson (2006) wrote, “The word *sustainability* is currently both our best hope and our biggest obstacle,” adding “—it is dying of misuse, and dryness, and reduction to buzzword” (p. 237). His essay was very popular and clearly resonated with the sustainability community: as *sustainability* became more popular, it was no longer conveying the senses that sustainability advocates were trying to communicate.

These criticisms reflect the development of two frequently related semantic processes: loss of meaning and changing emotional connotation.

Loss of meaning is called semantic bleaching, which in the broadest sense, can be applied to words for which it has become difficult to assign specific meaning (Fortson, 2003). Bleaching can be understood as a loss of concrete meaning, but the newer sense does not mean ‘nothing’; the newer sense might be more abstract but just as meaningful, that is, the change in meaning can be characterized as a shift as well as a loss (Hopper & Traugott, 1993/2003). Bleaching is frequently related to broadening (Hopper & Traugott, 1993/2003), and this has happened with

sustainability: as it absorbed more senses, it lost some of the early sense of environmental conservation.

Sustainability has also changed in its emotional connotation. Emotional connotation is partly how an expression reflects the feelings of the speaker (Leech, 1974/1985). A related sub-concept is evaluation, that is, how good or bad something is, which is one of the most important dimensions of associative meaning (Osgood et al., 1967). I will use the broader concept of subjectification. Subjectification of meaning is a process in which a form gradually shifts from a sense based on an external referent to an internal evaluation or attitude about the referent (Traugott, 1989). Speakers mark their attitudes on what they are saying, and the form gradually comes to encode the attitudes of the speakers about the referent (Traugott & Dasher, 2002/2003). The marking can strengthen a particular interpretation by listeners (Traugott, 1988). This marking is a source of innovation (Traugott, 2006). In the case of *sustainability*, one can imagine sustainability advocates marking their sustainability speech with a positive valence. Their listeners—especially in the wider community—were more likely to retain the positive valence of *sustainability* than their carefully crafted sustainability definitions. This is one possible mechanism for how sustainability developed the new sense of ‘goodness.’

Emotional words and bleaching frequently go together (Jurafsky, 2014), and bringing the bleaching and subjectification concepts together can add to the understanding of this sense of *sustainability*. As *sustainability* diffused from the sustainability community to a wider community, its senses broadened but the positive subjectification continued, and the specific denotations of ‘environmental conservation’ and ‘social justice’ shifted to the affective meaning of ‘goodness.’ Comedian John Oliver articulated this more concisely: “I don’t really know what it [sustainable] means at all. I just know that it’s a word that comforts people. Say *sustainable* and watch people go, ‘Oh good, we’re going to be ok guys’” (Seinfeld, 2016). Ironically, the success of sustainability advocates communicating with wider audiences about *sustainability* with a positive valence has been proportional (if time lagged) to both bleaching and their own subsequent negative evaluations.

2.4.7 *Contested meaning*

While the bleaching of *sustainability* has understandably led to negative subjectification by sustainability advocates, it might still have potential value. One sustainability entrepreneur appreciated the value of “this whole discourse of sustainable development, using all the language of capital and markets and completely skewering and constraining and constructively critiquing the practice of markets using its own terminology.” The early critiques of sustainability discussed above argued that *sustainability* was used to sneak in ‘non-sustainability’ ideas into the conversation. A sense of ‘contested meaning’ makes the opposite argument: *sustainability* can be used to introduce ideas about environmental conservation and distributive justice into wider non-sustainability discourses. This line of thinking dates back to the works of Leclau and others, and in the sustainability movement, at least to Jacobs (1999) who distinguished between the meaning of *sustainability* as denotation and as the site of political contest. Lack of denotative clarity does not make *sustainability* meaningless; pursuing denotative clarity is pointless, in this view. Wittgenstein (1953/2009) argued that clarity and meaning were separate. Like *democracy* or

social justice, reasonable people are broadly in favour of the vague, imprecise denotation of *sustainability*; the political contest is over the practical interpretation (Jacobs, 1999). The struggle for meaning constitutes the political struggle over sustainability (Jacobs, 1999). In a pluralistic, deliberative democracy, this struggle for meaning is how society tries to become more sustainable (Sneddon et al., 2006). In their popular essay, Nordhaus and Shellenberger (2004) applied the linguistics of Lakoff (2004) to the environmental movement. Their criticism was that environmentalists had been framing broader social problems as strictly environmental problems and “thinking only of their own narrowly defined interests.” They asked “why... is a *human-made* phenomenon like global warming — which may kill hundreds of millions of *human beings* over the next century — considered ‘environmental’?” Instead, they argued that these broader social problems should be framed as such, and environmentalists should serve other social movements. According to them, broadening the meaning of environmental problems had practical and social value.

2.5 Discussion

The many senses of *sustainability* documented here show how thoughtfully and sincerely sustainability entrepreneurs have engaged with its meaning. Their responses illustrate how *sustainability* has radiated from limited senses in 1972 of ‘environmental conservation’ and ‘human flourishing’ into additional senses. Some senses, such as ‘the three pillars’ and ‘intergenerational justice’ are well documented in the sustainability literature. Others, such as an appreciative lens, are not. I have assumed in this chapter that sustainability does not have one correct definition: all senses of sustainability are equally legitimate.

The many senses of sustainability illustrate both the outcomes and processes of semantic change. I found that broadening, narrowing, bleaching, and subjectification are semantic phenomena that can help to explain the evolution of *sustainability*. A linguistic perspective on *sustainability* is an alternative to the prescriptive and definitional perspectives that prevail: the focus is less on discovering an ideal, static definition and more on understanding the evolution of a form. Although for sustainability advocates *sustainability* is a very special word, the same processes that affect other words can also be used to understand the evolution of *sustainability*.

The many senses of *sustainability* can be thought of as multiple discrete definitions but they can also illustrate the merits of thinking about meaning arising from usage in different contexts, as Traugott (2006) suggested. People influence others by communicating as efficiently and effectively as possible, which drives language innovation (Blank, 1999). For the innovation to be successful and for the language to change, the language innovation does not need to better capture an ultimate truth: a speech community just has to believe that the innovation serves its’ communication goals (Blank, 1999). The many senses of *sustainability* indicate how sustainability entrepreneurs have communicated about sustainability in different contexts and in different ways to influence others, and how these different usages have shaped their multiple understandings of *sustainability*. They have perhaps been better able to influence others by communicating the senses documented here.

Sustainability scholarship and practice appear to have a strong definitional focus in understanding sustainability. The definitional focus is logical but somewhat problematic because

it relies on a positivistic assumption that a word simply means its referent. Word meaning comes from many things, particularly usage in context. Meaning is social (Blount & Sanches, 1977). Words mean something by referring to frames of human behaviour (Tannen, 1984/2005). Language itself is social behaviour (Sapir, 1927). A strong definitional focus leads to an incomplete understanding of *sustainability*, overlooking its processual and relational dimensions, which are particularly important for sustainability entrepreneurs as they seek to build positive relationships and shared meaning.

The definition of sustainability is subject to two contrasting trends: standardization and grounding in particular experience. Standardization is driven largely by professionalization. Like other domains of human activity, sustainability is being professionalized (for example, the efforts of the International Society of Sustainability Professionals). Standardized denotation and usage by a professional speech group is called jargon (Engberg, 2006), the development of which is one of the first important markers of a profession (Evans, 2010). Professional groups typically appropriate the meaning of their important words as part of claiming their identity and claiming exclusive jurisdiction, for example, how professional accountancy has appropriated the meaning of accounting (Grandvoinet et al., 2015). Although jargon has a negative connotation, it is simply part of living and working in human communities (Crystal, 2019). Jargon facilitates communication (Engberg, 2006) and can be used by professional groups to legitimate themselves, gain power (Potter, 1999), and build in-group togetherness. However, it makes communication with outgroups more difficult (Plavén-Sigray et al., 2017). This standardization trend is related to broader trends in the English language, specifically increasing learnability and concreteness (Hills & Adelman, 2015). These language trends are in turn perhaps due to social trends such as an increasingly crowded and competitive market for attention (Hills & Adelman, 2015). In this sort of market, *sustainability*—as a complex, polysemous metaconcept—is not likely to compete well. Currently, no single sense of sustainability is standard, although the ‘three pillars’ sense has increased in frequency and is likely the most popular sense.

The contrasting trend of grounding meaning in particular experience is also part of the definition of sustainability. The broader professional norms of standardization and language concreteness trends are not totally coherent with norms within the sustainability community. Characteristic of sustainability practice and education is a tendency to undergo a personal and/or organizational struggle to uniquely and skilfully define sustainability. The sustainability entrepreneurs in this study did not define sustainability to claim exclusive professional jurisdiction; they frequently defined sustainability in ways that would resonate with their organizational contexts. Each new sense of sustainability could easily have spawned a new discrete word; the history of language is full of examples of the value of using a new word to communicate a new concept. Instead, each new sense was absorbed by *sustainability* itself. “Language is created afresh, and a little differently, with each new speaker” (Fortson, 2003, p. 650). The meaning of *sustainability* is created with each sustainability champion and entrepreneur working in their organizational contexts. When everybody defines a foundational term for themselves, it can inhibit easy communication. However, in the sense of contested meaning proposed by Jacobs (1999), challenging communication is the point of defining sustainability.

I looked at *sustainability* in isolation from other words in the same semantic field. A fuller history would combine the semasiological approach here with an onomasiological approach (Durkin, 2009). Multiple processes of semantic change can operate across a network of words in “webs of shifting forms and relationships” (McArthur & McArthur, 1998, "Semantic change"), that is, how *sustainability* evolved likely depended on how other related words evolved, which I did not consider. An onomasiological approach would consider how the senses of *sustainability* have evolved in relationship with other words.

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3 Disconnected from practice: reviewing the sustainability reporting in higher education literature

3.1 Abstract

Purposes: The first purpose of this paper was originally to characterize the research literature on the relationship between sustainability reporting and organizational change in higher education from its emergence until 2015 to focus and support my subsequent research. A second purpose emerged to characterize patterns of research and practice in the literature on sustainability reporting in higher education.

Approach: I queried the Scopus database for articles on sustainability reporting in higher education. I coded both metadata and article content. I paid special attention to methodological choices.

Findings: The field was young, disconnected, and growing. I found only a small number of articles, published in a few journals, written by first authors from only a few countries. Very few articles cited literature from relevant fields, notably the sustainability reporting literature. The literature was disconnected from practice, with a minority of authors applying or studying industry standard reporting frameworks.

Limitations: I used Scopus, which is not a comprehensive index. The coding was all done by myself and is therefore subject to all my own personal limitations and biases.

Implications: The emerging industry standard is STARS, which has evolved from user feedback; scholarship has not contributed to its evolution. The broadest questions about sustainability reporting are over its effectiveness, which can only be addressed with a framework external to the sustainability report, ideally through rigorous scholarship. The scholarly literature had very little to contribute to these questions.

Keywords: sustainability reporting, higher education institutions, organizational change, STARS

3.2 Introduction

Sustainability assessment and reporting is a performance management tool with the potential to help higher education institutions transition towards sustainability (Association for the Advancement of Sustainability in Higher Education, 2014). Sustainability reporting can be part of a continuous learning process, a model of organizational change that arguably best fits the

higher educational institution context (Sylvestre & Wright, 2016). Sustainability reporting has two main purposes: 1) to assess an organization's environmental, social, economic, and governance-related performance; and 2) to inform and engage with stakeholders about that performance. Sustainability reporting has grown rapidly in many corporate sectors; the education sector currently is at an early phase of diffusion (Alonso-Almeida et al., 2015). As sustainability reporting becomes more popular, it is important to understand the organizational and sustainability performance impacts of sustainability reporting to maximize its relevancy and utility. These are areas of active research in most sectors but remain relatively unexplored in the higher education sector, with its unique organizational context for which both the overall reporting framework and its individual phases must be tailored. In this section, I systematically review the sustainability reporting in higher education literature. The purpose of this paper is to characterize patterns of research and application and to identify under-researched areas to focus my subsequent research on how sustainability reporting and organizational change can be integrated.

3.3 Methods

I looked at metadata, or information that describes the article, such as geographic and temporal trends, and journal of publication. I looked at geographic patterns to see how broadly distributed sustainability reporting in higher education institutions (HEI) research has been, whether some countries or regions have dominated research, and whether other regions have not engaged at all. I looked at the temporal evolution of the field to see when it started developing and how rates of publication have changed over time. I looked at which journals were publishing articles to see where and how widespread articles in the field have been published, and whether some journals were publishing a disproportionate number of articles.

I paid special attention to the methods and methodologies that researchers in the field have chosen. Methodologies and methods are significant because they can be closely related to each other and to a variety of other issues. The theoretical basis and methodological choices can bias a study towards particular perspectives, tones, and outcomes (Morse & Chung, 2003).

Methodologies also determine what is considered data and how to collect and analyze them (Morse & Chung, 2003). For example, a green accounting study rooted in pluralist traditions would likely have a different perspective of the scope and meaning of accounting than one rooted in neo-classical economics (Brown, 2009). The former might be interested in the role of users with varying power in defining questions and assessment methods, while the latter might implicitly exclude these questions from study by assuming that all users are equally served in a depoliticized, value-neutral environment.

To search for articles, I queried the Scopus database with search expressions composed of both sustainability assessment terms and higher education institution terms with any publication date. Specific terms are shown in Table 3.1.

Table 3.1. Terms used in search

Sustainability assessment term	HEI term
“sustainability report*”	University
“sustainability assess*”	“higher education”
"Environmental management system"	College
“ISO 26000”	Post?secondary
"Global reporting initiative"	
AASHE	
“UN Global Compact Principles”	
“AA1000 Standards”	
“Campus Sustainability Assessment Framework”	

Note: ? = single character wildcard; “ “ = phrase searching

After collecting all titles returned by the Scopus search, I read their abstracts. I included all titles for further analysis that met all four criteria below:

- The object of study was one or more higher education institutions; or one or more members of a higher education institution; or one or more departments/organizational units of a higher education institution was one of the study’s cases or participants.
- A focus of the paper was assessing one or more dimensions of sustainability
- The University of Saskatchewan library had access to the article
- The paper was peer reviewed

3.3.1 *Metadata*

For all articles, I recorded the date of publication, the journal name, and from the contact information of the first author, the country and the name of the lowest specified organizational unit. For example, if the first author were in the Department of Biology, in the Faculty of Science, I would record ‘biology.’ The name of the organizational unit is an indication of the disciplinary background of the first author, for example, an author in a chemistry department would likely have a chemistry background.

I grouped countries into regions and Europe into sub-regions (groupings from United Nations Statistic Division, 2013).

3.3.2 *Content*

For all English language articles, I reread and recoded the articles as I iteratively developed the coding scheme outlined below.

- Article type: I classified the articles into empirical research articles, literature reviews, and method development articles. Method development articles comprised those that focussed on proposing, testing, or validating a particular sustainability reporting method or framework.

- Research tradition and methodology: I determined whether the article discussed or applied qualitative, quantitative, or mixed approaches. Due to the prevalence of qualitative research, I further coded qualitative articles into one of the five major traditions of Creswell (1998): biography, phenomenology, grounded theory, ethnography, and case study. Narrative articles typically did not describe their methodology, so I coded them as such when I judged them to have used a narrative approach.
- Methods: how the articles described their own methods.
- Sustainability reporting terminology and framework: the sustainability reporting framework that the paper discussed, applied, or researched. The framework was either standardized or academic. When a paper assessed or discussed some sustainability domain without using a standard reporting framework, I coded it as academic.
- One or more of the following five sustainability domains/categories (definitions from Association for the Advancement of Sustainability in Higher Education (2014)):
 - curriculum/teaching: HEIs have formal education programs and courses that address sustainability
 - research: HEIs conduct research on sustainability topics
 - operations: HEIs measure and reduce their environmental impact
 - community engagement: HEIs help catalyze sustainable communities
 - governance: HEIs institutionalize sustainability
- Representation and participation: the paper discussed gender, ethnicity, or user participation in one of the reporting phases.

3.3.3 *Method Limitations*

Although Scopus is the largest citation index, no single index is comprehensive, so my set of returned articles was not comprehensive. Including other databases such as Web of Science could have increased comprehensiveness. The set of returned articles, however limited in size and scope, is sufficiently large to provide a snapshot in time of the field. My screening method relied on my interpretation of the abstract, but because not all abstracts clearly articulated all of the article's major ideas or methods, I could have mistakenly excluded articles. Generally, with a single coder, reliability cannot be assessed, and coding can be biased.

3.4 **Results and discussion**

The Scopus query returned 279 results. Applying the selection criteria summarized above reduced the set to 82. Although Scopus covers books, journals, and trade journals, all returned titles were academic articles. For five articles in German, I coded only the metadata. I coded 77 articles for metadata and content. The selected articles are listed in Appendix B. This section

summarizes the results of applying the coding scheme to these articles and discusses the patterns that emerged.

3.4.1 Geographic trends

The countries of first authors showed a marked geographic pattern. First authors were from only 19 countries. The majority of first authors were from just four countries: Canada (n=16 non-unique first authors), United States (n=12), United Kingdom (n=12), and Germany (n=10). They are shown in Figure 3.1.

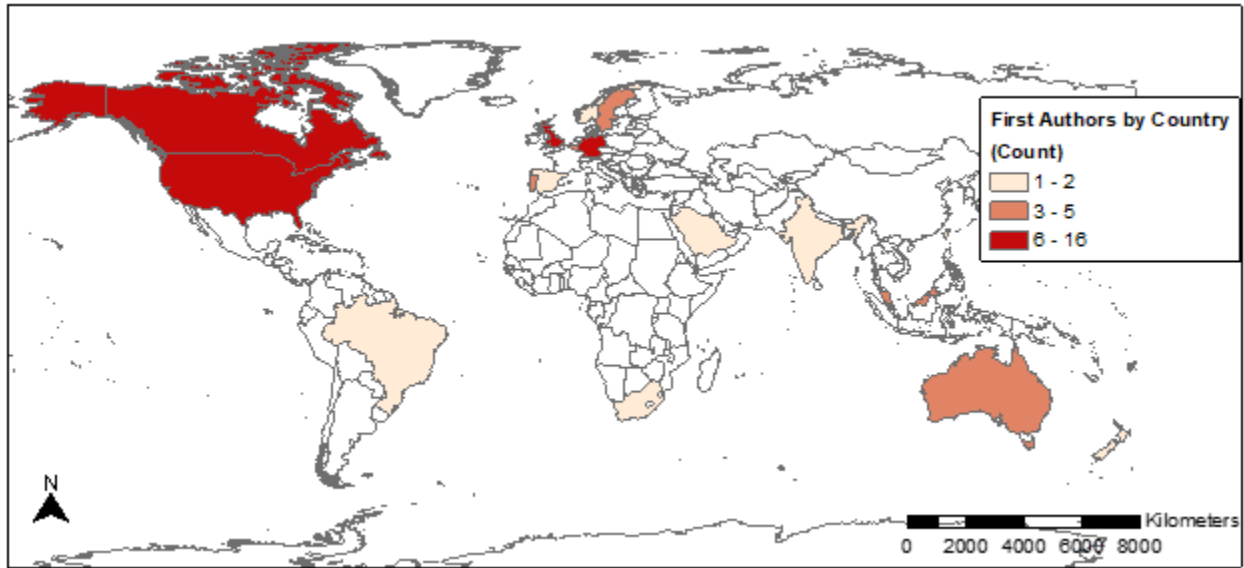


Figure 3.1. Count of first authors by country

Looking at regional patterns, first authors were disproportionately from Europe (n=37 first authors) and North America (n=28 first authors); this is in contrast to first authors from the rest of the world combined (n=17). Although first authors were situated in many European countries, not a single one was from Eastern Europe. First authors by region, and European sub-region, are shown in Table 3.2.

Table 3.2. First authors by region

Region/Sub-region	Count	Percent
North America	28	34
Western Europe	13	16
Northern Europe	18	22
Asia	9	11
Southern Europe	6	7
Oceania	6	7
Africa	1	1
South America	1	1
Total	82	100

As an area of academic research, sustainability reporting in HEI was geographically restricted. Although my search was not comprehensive, peer-reviewed sustainability reporting research did not appear to be occurring in most of the world's 17,000 universities. Two possible interpretations are: that research was not correlated with sustainability reporting and extant research was not capturing the diversity of experiences of sustainability reporting; or if research was correlated with reporting, then sustainability reporting has not captured the diversity of higher education experience. No global surveys have been conducted, so it is not possible to conclude anything with confidence, but there is some support for the second interpretation. For example, Jain and Pant (2010) noted that there were no universities in India with a functional Environmental Management System at the time of publication of their article. AASHE has developed the Sustainability Tracking, Assessment & Rating System which is popular in North America; the list of 708 STARS institutions (<https://stars.aashe.org/institutions/participants-and-reports>) included only 33 institutions outside North America (these institutions were spread throughout the world) (query 2015-05-12).

My search returned only five non-English language articles, which likely indicates an English language bias in the field. Although my search terms were in English, this is unlikely to explain all the variation. SCOPUS primarily indexes English language publications. The journals are primarily in the English language. And the first authors were disproportionately from English speaking countries.

3.4.2 Temporal trends

The earliest articles in the field were influenced by national and continental events. The earliest two articles (McDonach & Yaneske, 1996; Walton et al., 1997) both cited the Toyne Report (1993)—a report on the environmental responsibility of the higher education sector commissioned by the Welsh and British governments—as an assessment driver. Another key development that stimulated research was the development of environmental management system standards by both the British Standards Institution (1994) and the European Commission ("Emas regulation 1836/93," 1993), cited by both McDonach and Yaneske (1996) and Dettenkofer et al. (1999). Viebahn's set of papers about auditing the University of Osnabruck (Viebahn, Huischen, et al., 1999; Viebahn & Matthies, 1999, 2000; Viebahn, Schlesiger, et al., 1999), did not mention any events that initiated their research in their abstracts, but with their focus on auditing, it is very likely that EMAS played a role, even if only indirectly.

Since these early articles, the number of articles published in the field has risen steadily. The most recent articles were in press. The rapid growth between 1996 and 2015 is shown in Figure 3.2.

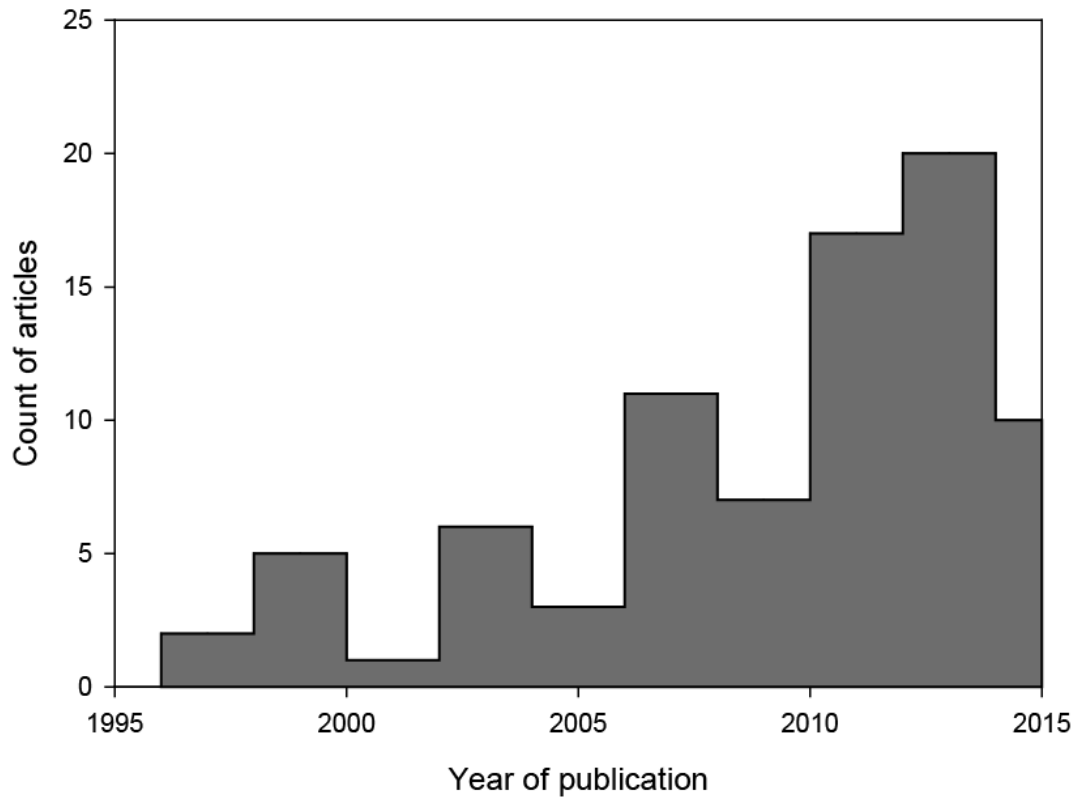


Figure 3.2. Number of articles per year

Country of first author and publication date were strongly linked. Before 2002, first authors were entirely from Germany and the United Kingdom. Canadian first authors appeared in 2006, but by 2015 outnumbered those from all other countries. These trends are shown in Figure 3.3.

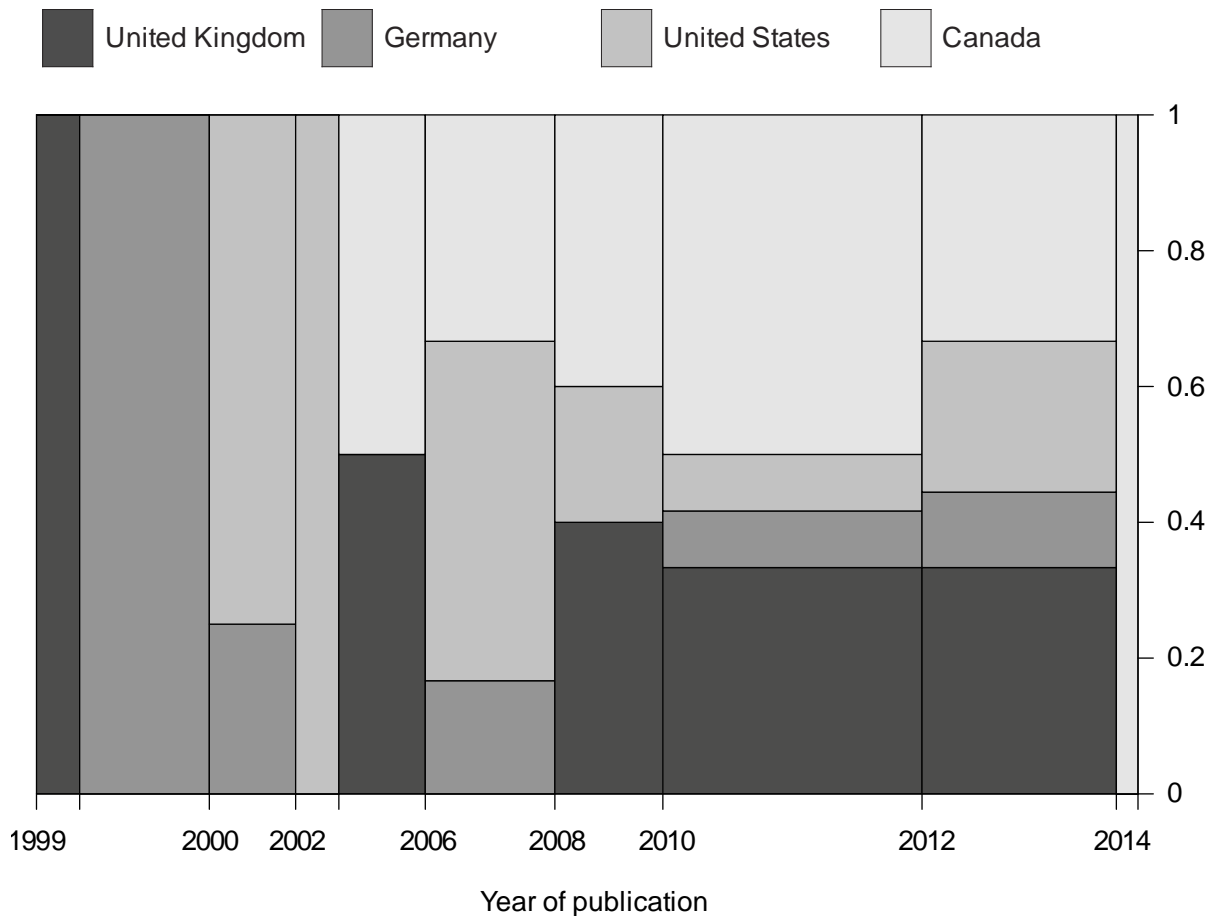


Figure 3.3. Relative frequencies of four leading countries of first authors by year

Note. The width of the horizontal bars shows the frequency of articles in a given year relative to all other years. The height of a bar shows the frequency of first authors from a given country relative to other countries.

3.4.3 Journals

Articles on performance management in HEI appear in many journals but are concentrated in two. Thirty-one journals published articles returned in my search, with most publishing a single article. The two leading journals by number of articles are *Journal of Cleaner Production* (n=24 articles) and *International Journal of Sustainability in Higher Education* (n=17 articles) which together published 50% of articles. Journals that published more than one article are listed in Table 3.3.

Table 3.3. Count of most popular journals.

Journal	Article count
<i>Journal of Cleaner Production</i>	24
<i>International Journal of Sustainability in Higher Education</i>	17
<i>Umweltwissenschaften und Schadstoff-Forschung</i>	5
<i>Sustainability Accounting, Management and Policy Journal</i>	3
<i>Higher Education Policy</i>	3
<i>Environmentalist</i>	2
<i>International Journal of Sustainable Engineering</i>	2
<i>Journal of Management and Organization</i>	2
<i>Sustainability (Switzerland)</i>	2

3.4.4 Author organizational sub-unit

First authors were housed in a variety of organizational subunits. The most common single term used in the organizational subunit name was “environment” (n=19), followed by “engineering” (n=9). I did not group similar terms together (e.g., “business” with “management”) because they are not necessarily equivalent terms.

Table 3.4. Count of organizational subunits terms

Organizational subunit single term	Count
Environment	19
Engineering	9
Sustainability	6
Business	5
Management	5
Science	5
Natural resources	4
Economics	3
Accounting	2
Health	2

3.4.5 Sustainability definition

Most articles did not define sustainability. Sixteen gave the three pillars or the intergenerational World Commission on Environment and Development (1987) definition. Only Bell (2011, p. 248) argued that local communities should “assert their own view of sustainability and contest the orthodoxy of top down and imposed visions of sustainability.”

In most of the sample articles, the sustainability definition usually made up one sentence at the beginning of an introductory narrative about how important it was for HEIs to meet the sustainability challenge. The definition was almost never developed or even referenced again, that is, the definition of sustainability that the authors chose could have been substituted with any other definition without impacting the narrative.

3.4.6 Methodology and methods of literature

I looked at methods and methodologies used in the literature set. Methods are techniques to collect and analyze data; methodologies are the strategies that link the methods to desired outcomes; methodologies are in turn justified by ontological and epistemological considerations grouped into various research paradigms and theoretical perspectives (O'Donoghue, 2007). Few articles reviewed here explicitly addressed higher level methodological questions, and in some cases, did not even clarify their methods to readers; I looked only at identified methods and methodologies. I identified the most common research methods, whether methods were qualitative or quantitative, and classified qualitative methods by research tradition. A large majority of articles were empirical research articles (n=48 articles). Fifteen articles reviewed the literature and 10 proposed methods.

The articles documented the use of a variety of methods. However, just three methods dominated all others, as shown in Table 3.5. Many articles described methods that were unique to that article or author.

Table 3.5. Frequency of most popular methods used

Method	Article count
Document analysis	19
Surveys	16
Interviews	16

3.4.6.1 Predominance of qualitative research

Research on sustainability assessments in higher education institutions has predominantly used qualitative research methods and has seldom used quantitative methods. Of the 77 articles, 59 used qualitative methods, only 14 used quantitative methods, and nine used both qualitative and quantitative methods. All three of the most commonly used methods coded here were qualitative. Mader (2013) argued that the disproportionate popularity of qualitative research in this field is due to the complexity of analysis required to address the diversity of issues surrounding any given proposal or initiative. For example, Baldwin and Chung (2007, p. 82) chose to conduct a qualitative study because it could shed light on the design of campus assessments for areas in which there was “little methodological experience recorded in the literature” and the uniqueness of each case resulting from each decision-maker’s “past experiences with community partners, colleagues, markets, and their own personal histories.” In general, one of the major reasons to conduct qualitative research is when guidelines and procedures are poorly established and dynamic (Creswell et al., 2007); it appears most researchers believe this to be the case for sustainability reporting in higher education.

3.4.6.2 Qualitative research traditions

The qualitative research methods were typically either not explicitly associated with any research tradition or with the case study approach. Thirty-eight articles did not describe or mention any of the research traditions of Creswell (1998). Twenty-nine articles either described their study as a case study, or the research used a case study approach as well as I could reasonably determine. Other research traditions were infrequently used. Three articles used grounded theory. Thomson

et al. (2011) chose to use grounded theory because it ensured that the findings were emergent, rooted in context, and researcher preconceptions were minimized. One article used ethnography: Baldwin and Chung (2007) chose ethnography to study the link between culture and behaviour at a research farm and to gain an in-depth understanding of the perspectives of insiders. Corcoran et al. (2004) argued that the sustainability in higher education literature was far too reliant on (under-theorized) individual case studies. Although their article is widely cited, it appears most authors have not been eager to try other approaches. A review of research methods in organizational science concluded that changes occur slowly, typically over periods greater than 20 to 30 years (Aguinis et al., 2009), so a greater diversity of research traditions might still appear.

3.4.6.3 Methodologies

Narrative inquiry, as a research methodology, was used in 32 articles, far more than all other methodologies. Narrative inquiry attempts to understand and represent experiences by connecting events in a story. Czarniawska (2011) argued that stories are the basis for how we construct organizations and society, for understanding and communicating in organizations, and that theories of organizations are theories of how to read stories. Czarniawska (for example, 1998; 2011) has claimed that scientific ways of knowing are overrepresented in organization studies and has championed the reintroduction of narrative knowledge. However, in the field of sustainability assessments in higher education, narrative knowledge does not appear to have been undervalued; the opposite claim—that it has been highly valued over every other methodology—better fits the data.

Only four studies described their research as participatory action research, although many more had a participatory component (described below). Rojas et al. (2007, p. 91) chose community-based action research “(a) to investigate systematically their problems and issues, (b) to formulate powerful and sophisticated accounts of their situations, and (c) to devise plans to deal with the problems at hand.” For Bell (2011, p. 248), engaging with the research question—“How can communities of place, of interest and/or of practice be encouraged to be proactive in their own measurement, assessment and subsequent development?”—required a participatory action research approach. Jones et al. (2012) observed the added benefit that the appetite for participatory approaches fed on itself, that is, as the university community participated in an environmental management system, their preference for more participatory approaches increased. The participatory action research articles all had relatively explicit discussions about their methodologies in contrast to the articles using narratives which very infrequently discussed any methodology.

Only one quantitative article (Sammalisto & Brorson, 2008, p. 300) explicitly mentioned higher methodological concerns by describing their approach as “practical, positivistic and quantitative.” Articles occasionally referred to specific methods as methodologies, and I did not code these as methodologies.

The most remarkable finding reviewing the methodologies of this literature is that there has been so little explicit discussion about methodology. The absence of methodological discussion could be problematic for two reasons. Firstly, methodological choices are conventionally intertwined

with a host of other research issues, including choices about questions that are asked, data that are considered or rejected, and how they are analyzed (Morse & Chung, 2003); by not surfacing the epistemological and methodological framing of their studies, researchers are incidentally concealing the limitations associated with them. Secondly, the absence of discussion hinders methodological progress in the field. For example, the disproportionate representation of narrative approaches relative to other methodologies or relative to their representation in organization studies more broadly, has not been discussed or explained. This might be because storytelling is the most natural approach, as Czarniawska (2011) argued. However, whether this view is appropriate for the field is difficult to assess based on the absence of discussion about narrative approaches, their suitability in the context of higher education institutions, or their merits relative to other approaches.

3.4.7 Report terminology and frameworks

In defining sustainability reporting, I included all methods of collecting, processing or analyzing, and reporting sustainability related information to manage environmental or sustainability performance. The most common terms used to capture these concepts were environmental management system, environmental management accounting, sustainability assessment, and sustainability reporting. There have been some terminological changes over time with the earliest articles predominantly using the term environmental management system and other terms appearing later. In the reviewed literature, the term *sustainability assessment* first appeared in Shriberg (2002) and *sustainability reporting* in Albrecht et al. (2007).

Environmental management system was the most frequently used term (n=27 articles). One third of higher education institutions in the USA have implemented EMS (Savely et al., 2007). Environmental management systems comprise cycles of planning, implementing, checking, and reviewing (International Standards Organization, 2004). Environmental management systems tend to focus on quantitative indicators of environmental performance (Disterheft et al., 2012). They can be used for organizational learning about sustainability. For example, Ferreira et al. (2006) saw the implementation of an EMS as a “golden opportunity” to foster participation, develop new theories, improve curriculum, and conduct research. Sambataro Iii and Hughey (2006) observed some shortcomings of EMS including a failure to publicly disclose the company’s environmental effects, its complex implementation requirements, its lack of clear environmental goals, and inability to consider social issues.

Environmental management accounting is the generation, analysis, and use of financial or non-financial environmental information to improve organisational financial and environmental performance (Bartolomeo et al., 2000). It can include reporting, auditing, life-cycle costing, full-cost accounting, benefits assessment, and strategic planning (Bartolomeo et al., 2000). Although frequently perceived as objective number crunching, accounting is a social practice that shapes individual and group attitudes, and through which parties exercise power over one another; this is increasingly recognized in some areas of green or sustainability accounting (Brown, 2009). The frequency of the major terms used are shown in Table 3.6.

Table 3.6. Performance management system terminology frequency

Management system terminology	Article count
Environmental management system	25
Sustainability assessment	17
Sustainability reporting	10
Environmental management accounting	2
Life cycle analysis	2

The performance management terms above loosely outline different areas of managing sustainability performance that can be implemented in a variety of ways. A number of frameworks have been developed that set out specific standards or guidelines to provide guidance to institutions on how to implement those standards; the most popular also offer a registration service for institutions that adhere to their standards. For example, the most well-known set of EMS standards is ISO 14001 (International Standards Organization, 2004) which sets out the criteria for an effective EMS. Organizations can then certify to ISO 14001. Similarly, the Global Reporting Initiative is arguably the most well-known sustainability reporting standard and sets guidelines for conducting a sustainability report.

Most of the research reviewed here was not conducted on or using standardized sustainability frameworks. Literature in the field is dominated by articles describing reporting frameworks that the authors had developed themselves (Other framework) or describing their assessment of a domain of sustainability that did not use any reporting standards (Academic research). These articles frequently did not reference practitioner or academic literature on sustainability reporting frameworks or discuss their choice of a non-standard approach, for example, why they would choose to assess a sustainability domain using their own method instead of using a standardized approach.

The frequency of implementation standards is tabulated below (Table 3.7). The most popular standardized reporting standard was ISO 14001.

Table 3.7. Count of performance management implementation framework

	Reporting framework	Article count
No implementation standard	Academic research	24
	Other framework	21
Standardized implementation	ISO 14001	16
	Global Reporting Initiative	9
	Sustainability Tracking, Assessment & Rating System	7
	Campus Sustainability Assessment Framework	5
	Eco-Management and Audit Scheme	3
	Sustainability Assessment Questionnaire	3

The Global Reporting Initiative is one of the most complete sustainability reporting tools for corporations, but does not offer guidelines on assessing or reporting on education institutions (Lozano, 2006). To be applicable to higher education institutions, GRI must be modified to include their core competencies of education and research (Lozano, 2006). Although GRI did not have an education sector, it was still the second most researched framework for assessing sustainability in HEI. Lozano (2006) proposed a GRI education sector, and although widely cited by academic researchers, I could find no other researchers who documented its application. If a GRI education sector becomes standardized, GRI will likely become even more popular as an area of research and practice.

The Sustainability Tracking, Assessment & Rating System, or STARS, is also based on GRI. Despite being developed specifically for higher education institutions, STARS was not more frequently researched than GRI. In a comparison of three reporting frameworks, Shi and Lai (2013) found that STARS was a comprehensive framework, but suffered from double counting, interdependency among criteria, and did not assist decision makers assess the relative importance of criteria.

I take the position that the management system terms in Table 3.7 are distinct but convergent. There is considerable variability within these systems types and the variability between them might be shrinking. They frequently involve collecting the same data and are heavily redundant. Most of the 16 essential elements in ISO 14001—for example, assigning responsibility for environmental matters and procedures for data management—could all fit within a GRI report. They refer to each other, for instance, having an EMS could be a sustainability indicator. Ultimately, they are all potential tools that higher education institutions can use to manage their sustainability performance and shift towards sustainability.

3.4.8 Sustainability domain

The five sustainability domains were all well-represented in the research. The *operations* domain was most commonly researched, while *research* was the least. This corresponds with Wright (2010) who noted in her survey of university presidents that when asked about the term “sustainable university,” the majority thought of operations and a small minority thought research was a way that universities could contribute to sustainability. All domains are interrelated in a sustainable campus. For example, operations are part of the hidden curriculum (Müller-Christ et al., 2014); similarly, the curriculum equips future leaders to contribute to sustainability transitions in a sustainable university (Sterling & Maxey, 2013). The frequency of sustainability domain research is tabulated below (Table 3.8).

Table 3.8. Count of articles by sustainability domain

Domain	Article count
Operations/Estate	54
Governance/Planning and administration	51
Curriculum/Teaching	50
Community outreach	35
Research	33

3.4.9 Representation and participation

Most studies were not concerned with gender or ethnicity. Only eight articles explicitly addressed gender; five articles addressed ethnicity or race. Carol Adams has been one of the more active researchers in the field, and she lamented that university leadership was dominated by unimaginative, aging white male academics (Adams, 2013). She argued that gender diversity increases collaboration. Ethnic group polarization was a major concern on Malaysian campuses, so Saadatian et al. (2013, p. 50) added a sustainability indicator called “actions that bring different races together” to their assessment.

Only 15 articles addressed participation. For Disterheft et al. (2012), a better integration of participation into sustainability assessment practices could help in establishing participatory approaches to institutional learning and foster a culture of participation in the transition to sustainable universities. Participation also relates to curriculum: placing students at the center of their educational development leads to a stimulating academic environment, increases a sense of ownership, and more interest in the academic process (Klazina, Visser et al, 2004; Nair 2002). Rojas et al. (2007) wanted to conduct research that adhered to the following principles: open communication, participation, inclusion, relationship-building, and capacity-building.

Although issues of participation and representation are poorly reflected in practice, they have started to be reflected in some sustainability assessment theorizing (Frame & Cavanagh, 2009). For example, a democratization approach to accounting promotes social interpretation, pluralism, and the engagement of currently marginalized voices (Brown, 2009; Söderbaum, 2006). A growing number of accounting researchers have located their work within pluralist traditions (Brown, 2009). Similarly, the Global Reporting Initiative was envisioned as a transformational technology to promote social dialogue and collaborative governance (Brown et al., 2009). These examples are part of broader trends recognizing that research on wicked problems (*sensu* Churchman, 1967) would benefit from incorporating some characteristics of post-normal science (Ravetz, 2006). Research in this context is not just about targeting pressing problems and passing value neutral information or the results of conventional decision analysis to decision makers (Ravetz, 2006). Decision making under uncertainty calls for social processes of negotiation and learning (Frame & Brown, 2008) and an experiential commitment to developing trusting relationships (Ravetz, 2006). Based on the minimal research on representation and participation this review found, one implication for practitioners and researchers of sustainability reporting in HEI is that they think more about how users are involved in various phases of sustainability reporting research and practice.

3.5 Conclusion

The higher education sector has been slow to adopt sustainability reporting; as a consequence, the research field of sustainability reporting in higher education institutions is young and geographically restricted. Just two journals have published the majority of articles in the field. Even given the English language bias of the data and the search methods, the field likely has an English language bias. However, the field is growing, and the research is increasingly performed in a variety of departments and countries.

The literature displayed some clear patterns of methodological choices. The literature was dominated by case study narratives, and perhaps related to this, many articles did not explicitly address their research approach. More explicit discussion and conscious deliberation about methodological issues might potentially bring greater methodological diversity to the field. However, the opposite conclusion can just as easily be reached: how important can explicit methodological discussion be if so little research included it? Although most reporting frameworks have tried to be quantitative and standardized, most research on reporting has been qualitative and unique. As datasets grow at more institutions over longer time periods, and as research becomes less exploratory, quantitative research could help to discover broad-scale patterns not visible at the finer scale that most research is currently conducted.

The literature on sustainability reporting in higher education was quite isolated. It was disconnected from both related scholarly literatures and from the field of sustainability reporting practice. Almost a third of all the reviewed articles attempted to assess a domain of sustainability in a non-standardized way, that is, the studies developed and used a unique assessment method that was not situated in the practical literature on sustainability reporting. Another quarter developed a non-standardized sustainability reporting framework and proposed that others adopt it. These articles infrequently cited literature about formal sustainability reporting frameworks. Researchers in the field were perhaps not aware that there were standardized ways to report sustainability, or they found those standardized tools unsatisfactory. However, researchers infrequently discussed their choice to avoid standardized tools and in so doing missed an opportunity to advance the discussion on gaps and limitations of current reporting practices and methods. STARS is becoming the standard in the education sector and ISO 14001 is already the industry standard; they are well-known and used by practitioners and have some legitimacy at executive levels of organizations. If these researchers believe that these standardized tools have a shortcoming that prevents them from using them, explicit discussion about those shortcomings could make them better. AASHE regularly receives and incorporates feedback from practitioners, which is largely how STARS has evolved. However, this feedback is generally opportunistic and non-scholarly. The divorce between the academic literature and the field of practice has a number of consequences. One result is that STARS has largely evolved independent of scholarly scrutiny. A second result is that much of the scholarly literature is irrelevant to the majority of sustainability professionals, who typically use STARS or other standardized frameworks. A third result is that the relationship between campus sustainability and STARS is unknown. STARS cannot evaluate its own effectiveness; effectiveness can only be assessed on terms external to the reporting system. Evaluating STARS on external terms—ideally terms from relevant literature—is a role that scholarship can potentially fill but has so far neglected.

In this review of the sustainability reporting literature, although there were some stronger patterns, such as the lack of discussion about methodology and representation, the articles did not specifically relate to the organizational change literature. They did not specify or hypothesize about mechanisms of interaction between sustainability reporting and organizational change. Many articles mentioned organizational change or a similar concept, but as a black box, that is, the implicit logic was that a completed sustainability report fed into a black box of organizational

change. Because the conceptualization of organizational change was so vague, this sustainability reporting literature review did not help focus future research on the integration of sustainability reporting and organizational change.

In general, the field of sustainability reporting in higher education appears disconnected from the field of organization studies. One review of organizational learning for sustainability in HEI concluded that sustainability assessments could be a valuable learning tool (Sylvestre & Wright, 2016). Another review of sustainability assessments in HEI identified its linkages with organizational learning as the major area for future research (Ceulemans et al., 2015). Therefore, both literatures have identified the importance of bridging the gap between them. Both Sylvestre and Wright (2016) and Ceulemans et al. (2015) used the term organizational learning, which is one branch of organizational research which appears to have some relevance in higher education, perhaps due to writing such as Kezar (2005). Broadly speaking, sustainability reporting research could draw on the organizational research literature to frame questions about, for example, organizational change and knowledge management; however, as I am not aware of studies that have done this, this is more conjecture rather than an empirically supported claim about the utility of organizational research literature to sustainability scholarship.

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4 Introduction to institutional perspectives

4.1 Introduction

The purpose of this chapter is to help the reader understand Chapter 5 by introducing the theoretical perspectives I used. Chapter 5 integrates two strands of the institutional literature to help contextualize the experiences of sustainability entrepreneurs with sustainability reporting: the institutional literature and the institutional work literature. In the language of systems theory, to understand a phenomenon, I need to understand one scale up for constraint, and one scale down for mechanism. In other words, to help me understand sustainability reporting as organizational change—which is itself cross-scale—I found the institutional lens helpful to understand the broader scale constraints of organizational and professional fields and the institutional work lens helpful to understand the finer scale mechanisms of change from the perspectives of individual entrepreneurs. Specifically, the variables I thought were most relevant to understand the experiences of sustainability entrepreneurs with sustainability reporting were legitimacy and agency. Institutionalism and institutional work are theoretical perspectives that not only respectively centre legitimacy and agency, but also complement one another.

Section 4.2 introduces one variant of the institutional literature, the action and political models of Brunsson (1989). I apply the political model to the Higher Education Institution (HEI) and the historical expansion of its responsibilities as a strategy to gain external legitimacy. I then use the political model to explain how higher education institutions can gain legitimacy from assuming responsibility for the sustainability challenge and how sustainability reporting meets multiple objectives as a presentation output.

Section 4.3 introduces the idea of institutional work, which is synonymous with institutional entrepreneurialism. Like institutionalism more broadly, the institutional work literature has incorporated more and more theoretical lenses and concepts. This enhances the potential meanings and applications of institutional work but hinders simple explanation. I introduce ideas—logics, power and status, the professions, and cooperation—that helped me to understand both institutional work and the work of sustainability entrepreneurs.

4.2 Higher education institutions as political organizations

4.2.1 *What is institutionalism to me?*

The institutional literature is difficult to neatly summarize or explain. This is in part because scholars have made divergent and even contradictory claims about what institutionalism is. It is also because, as in any academic citation network, the ideas have evolved, but unlike many other networks which have come up with new names for new theoretical developments, its scholars

continue to use the *institutionalism* label. Scott (1987) said in his classic review of institutional theory that the first thing to know was that there were many variants. Since his review, when institutionalism was in what he termed its ‘adolescent’ phase, it has addressed and incorporated an increasing number of concepts, and it is more difficult to simplify them all under a single unifying concept or thread.

I do not consistently distinguish between ‘old’, ‘new’ and ‘neo-’ institutionalisms and I cite ideas from all of those variants using the *institutionalism* label. I cannot find consistent usage of these prefixes across authors, or even necessarily the same author over time. When DiMaggio and Powell (1991) coined the terms *old* and *new institutionalism*, it was in the context of highlighting how great the new institutionalism was. Just because DiMaggio and Powell (1991) classified certain ideas as *old* does not mean that others need to accept that label. Even before their categorization, the variation in usage was quite high, and contradictory senses were equally common, as, for example, Zucker (1988) lamented. The authors were writing in particular contexts, which were frequently ongoing exchanges with one another. Much of the disagreement seems to me to correlated with scale but scale is rarely explicit or theorized. I assume that ‘institutionalism’ comprises a relatively densely interconnected citation network producing varied, even seemingly incompatible, ideas. My motivation is most importantly to make sense of the conversations with sustainability entrepreneurs, and secondarily, to use institutional terms to do so, without necessarily providing the full context in which these terms were developed. Disclaimers aside, the ideas that I draw on most frequently in this dissertation and that resonate very strongly with my personal and intellectual understanding of organizations—legitimacy, survival, mimetic and normative isomorphism, the huge influence of professional and organizational fields on organizational behaviour— would frequently be associated most strongly with the ‘new institutionalism.’

4.2.2 *The action and political models*

One method to more easily introduce the institutional literature is to collapse many of its main ideas into two ideal classes, as Brunsson (1989) did in his simple typology of action and political organizations. I am not aware of any other institutional theorist who has developed such a simple denotation of an organization. In using Brunsson’s typology, my objective is not to present the richness and variety of the institutional literature, but rather to present a simplification of some major ideas.

In Brunsson’s typology, an action organization is an efficient form of coordinated action to achieve a specific, shared objective¹. According to (Brunsson, 1989), action organizations are specialists: they act to produce specific solutions for discrete problems. To produce as efficiently and effectively as possible, organizational processes, norms, structure are geared towards control and consistency. The action model is pervasive, if not always explicit. It has dominated popular

¹ Brunsson (1989) cited few other works, regardless of how relevant they might be. This section, in keeping with that style, also lightly cites. Uncited text can be assumed to be from Brunsson (1989).

and practitioner understandings of organizations, for example, undergraduate business textbooks might propose a similar definition of an organization, and organizational consultants might propose an intervention implicitly based on the action model. In contrast to action organizations, political organizations are generalists: they produce talk and decisions about insoluble problems. Organizational processes, norms, and structure in a political organization are geared towards producing external support and legitimacy by assuming ever expanding responsibilities, demonstrating that the organization is meeting the needs of its external constituencies, and observing the norms of these constituencies. Characteristics of both models are summarized in Table 4.1.

Table 4.1 Characteristics of action and political organization models

Organizational characteristic	Action	Political
Problems tackled	Specific	Insoluble
Output	Actions and solutions	Talk, decision making
Organizational design	Control and effective action	Presentation and responsibility
Decision process	Irrational	Rational
Effect of goals	Guide action	Substitute for action
Leadership	Homogeneous	Heterogeneous
Employee emotions	Animated	Depressive
Environmental dependencies	Few	Many
Environmental isomorphism	No	Yes
Lifespan	Short	Long

Note: This table is a simplification of Brunsson (1989), chapters 2 and 9.

Brunsson (1989) tightly bound the political model to the rationality model. The rational decision process is pluralistic, involving consultation with a broad range of constituents and bringing together different points of view. The rationality decision process is also ‘objective,’ involving the weighing of competing objectives, applying these criteria to competing alternatives, and then planning logical action. Rational decision making assumes and reinforces the ideas that setting goals and making decisions are both important and lead to action. Importantly, rational decision making allows the political organization to visibly demonstrate to all its constituents how their voices are being heard and how good at decision making it is. Internally, rational decision making allows formal leadership to strengthen its power (as leaders are the ones who set goals, make decisions, and produce ideology) and helps employees maintain hope that the endless decision processes will eventually lead to action. Ultimately, rationality justifies substituting decision making for action. Rational decision making is a practical response by a political organization facing an insoluble problem: the organization can publicize its grand ideology and rational decision making while doing nothing.

The political model exemplifies what many in our society consider to be negative attributes. In particular, “all talk and no action,” has a negative connotation. Because political organizations need to address their persistent inaction and failure to achieve their objectives, they present themselves, both internally and externally, as action organizations, that is, they talk about action, underlain by faith in rationality and progress. The longer the inaction, the more the political

organization must talk about action. However, in changing external environments, internal environments characterized by competition and heterogeneous belief systems, and a mission devoted to solving insoluble problems, action is not possible; the political model is therefore the most rational organizational form for survival and legitimacy.

Both political and action models help to explain organizations, but they are not equally applicable to all organizations.

4.2.3 Openness

Organizations are embedded in social networks that structure and constrain their behaviour. The political model recognizes these environmental influences and posits that political organizations reflect their environments. This dimension of politicization is called openness or environmental isomorphism. Political organizations must not simply achieve their own mission but conform to external norms and institutionalized environments. The political organization aims to achieve external legitimacy by incorporating external constituents. When an organization is open to its environment and incorporates external people, processes, or norms, it can then seek support from the constituencies from which they came. As multiple external constituencies become internalized, the organization becomes more internally heterogeneous and inconsistent, and similar to its environment. The coexistence of contradictory forces can also be called hybridity (Teelken, 2015).

All organizations, even stereotypically action organizations, have become increasingly political. Politicization has resulted in part from the emergence of new political and moral issues, from organizations assuming responsibility over these issues, and from the organization's constituents consequently having greater expectations (Brunsson, 1989). Many of these new issues and responsibilities are characterized by contested or ambiguous goals, and uncertainty about the means to achieve them, both of which lead to institutionalization (Dimaggio & Powell, 1983). As one organization institutionalizes, other organizations have to react, frequently by institutionalizing, and the field as a whole becomes more institutionalized (Schelling, 1978/2006).

4.2.4 HEIs are political organizations

Like other public sector organizations, higher education institutions are organized to provide public goods and are therefore seemingly action organizations. However, the public good is a vague, contradictory idea, and its provision is strongly and inevitably political. The legitimacy and survival of HEIs depend on the external perception that HEIs contribute to the public good, while managing conflicting norms about what that means. The political model is very useful to understand HEIs.

HEIs embody the main characteristics of political organizations. They are expected to observe inconsistent environmental norms and tackle insoluble problems. In response, they have organized around multiple ideologies, conflict structures, continuous internal criticism, problem-oriented and rationalistic processes, and the decoupling of talk, decisions, and products (Brunsson, 1989). Universities are full of articulate speakers and writers who mistake endless abstract discussion, debate, and criticism for action. As Rome burns, Fullan and Scott (2009)

charged, the university retreats to what it knows and loves: intellectually engaging abstract dissection and critical thinking.

4.2.5 How do HEIs respond to environmental changes?

One perspective is that the longevity and great strength of the HEI lies in its ability to resist fads such as sustainability or market-inspired control: in other words, commit exclusively to the mission to survive (Birnbaum, 2001). However, the view that a higher education institution's mission is static is inconsistent with the expansion of responsibilities throughout the history of the higher education institution. The higher education institution is one of the longest-lived organizational forms, some having endured for hundreds of years. Ancient Greek and medieval HEIs were primarily concerned with teaching (Compagnucci & Spigarelli, 2020). In the 1800s, von Humboldtian reforms in Germany added research as a core mission of HEIs (Compagnucci & Spigarelli, 2020). The *Morrill Acts* and associated acts in the late 1800s in the United States added the production of human resources to serve the managerial revolution (Ferleger & Lazonick, 1994). This capitalization of knowledge was codified in the Third Mission, in which the entrepreneurial university added economic and social development to its core functions (Adesola & Datta, 2020; Clark, 1998; Etzkowitz, 1998). It can be argued that environmental changes, for example, globalization and the knowledge economy, have led to careful re-examination of the missions of HEIs and debates on their need to for further expansion (Compagnucci & Spigarelli, 2020). HEIs are traditionally very eager to assume a leadership role in economic development and in all the challenges facing society (Association of Universities and Colleges of Canada, 2011; European Commission & OECD, 2012). HEIs also provide a wonderful setting for the normative argument about whether they should or not.

The willingness of HEIs to respond to recent challenges and the historical expansion of HEI responsibilities are examples of HEIs responding to external demands. That an organization's survival depends on its response to external demands is a foundational assumption in institutional (Meyer & Rowan, 1977), resource dependency (Pfeffer & Salancik, 1978/2003), and systems (Yuchtman & Seashore, 1967) perspectives. This is called isomorphism in institutionalism and adaptation in resource dependency. These perspectives would predict that HEIs are unlikely to remain exclusively devoted to their traditional three core missions.

4.2.6 HEIs assume responsibility for sustainability

The sustainability challenge is yet another area over which HEIs claim responsibility. Sustainability advocates have argued that sustainability should be considered for inclusion among HEIs' core missions (Rubens et al., 2017; Trencher et al., 2013). HEIs themselves have been very eager to assume a leadership role in tackling the sustainability challenge. The Talloires Declaration (1990), the Halifax Declaration (1991), the Swansea Declaration (1993), and the Rio+20 People's Sustainability Treaty for Higher Education (Higher Education Treaty Circle, 2012) are just some of the 19 international higher education sustainability declarations that hundreds of universities signed between 1984 and 2014 (Tilbury, 2014). With each declaration, individual HEIs and the higher education sector as a whole demonstrated a willingness to adapt to changing environmental norms, expanded their responsibilities, and satisfied and allied with constituents.

Political organizations assume responsibility for new domains and present what their constituents want to hear while avoiding action. This model fits with the behaviour of higher education institutions. Critics have argued that sustainability declarations have generally failed to impact even internal university policy or practice (Bekessy et al., 2007). Assessing how well universities have led the sustainability charge is perhaps an insoluble problem itself, however the United Nations Environment Programme (2012) has diplomatically and encouragingly stated that meeting the sustainability challenge requires the university to improve on delivering its core missions. Failure to deliver on sustainability outcomes is not a political failure. Politically, the important point is that HEIs have assumed responsibility for another insoluble problem. Their performance in tackling sustainability can never be practically judged. They have produced outputs, such as declarations, that build alliances and legitimacy with external constituents concerned with the sustainability challenge. These presentation outputs help the HEIs garner support from sustainability constituencies, which then become invested in the HEIs' interests.

4.2.7 HEIs can use sustainability reporting to build legitimacy

Legitimacy is strengthened as constituents are integrated into an organization. For example, by allowing criticism, external constituents can become a part of presentation outputs. HEIs have frequently created consultation processes that provide a platform for sustainability constituencies to voice their concerns. In the sustainability in higher education literature, two dominant strands are 1) criticism of HEIs for not doing more, and 2) arguments for how critical it is for HEIs to assume a sustainability leadership role (for example, educating future leaders, modelling innovation, etc.). The one argument that is not made in the Sustainability in Higher Education literature is that HEIs should limit their sustainability responsibilities. These strands in the Sustainability in Higher Education literature fit in perfectly with a rational political organization organized around presentation and responsibility.

Another means of strengthening the presentation is internalizing external constituencies, by, for example, adopting procedural norms. To satisfy external constituencies, HEIs have adopted various strategic and performance management tools. These tools have become entrenched means of achieving certain organizational goals. Part of the presentation model, they demonstrate that the organization is responsible, rational, and modern (Meyer & Rowan, 1977), allowing HEIs to demonstrate to their funders how efficiently and effectively they are using public funds. The most well-known performance management tools have been grouped under the label managerialism and new public management (Deem, 2001), which academics have criticized for its ties to a neoliberal agenda (Kalfa et al., 2018), arguing that autonomy has been replaced with bureaucratic control (Feller, 2009), and that traditional scholarly and collegial values have been weakened (Marginson, 1997).

Sustainability reporting frameworks such as STARS can be considered as forms of performance management. According to institutional theory, these frameworks can fulfil political functions for HEIs by making them more open, by building legitimacy, and by reflecting inconsistency. Could sustainability entrepreneurs leverage these political outcomes—legitimacy and external constituency support—to achieve their own sustainability aims? Can the same tools and language used to promote neoliberalism and managerialism and to disempower professionals (as in

performance management) be used to promote sustainability? Sustainability entrepreneurs across North America have imported external scripts (i.e., sustainability reporting) into their respective campuses to do just that. The next section introduces institutional work, a theoretical lens for looking at these questions.

4.3 Sustainability as institutional work

4.3.1 *The institutional entrepreneur*

The political organization is an institutional model that can be used to understand why change is so difficult in large formal organizations such as HEIs but it does not offer much insight into change efforts. The foundational texts of the *new institutionalism*, for example, DiMaggio and Powell (1983); Meyer and Rowan (1977), focussed narrowly on institutionalization and isomorphism. This does not leave much room for individual agency or behaviour, does not explain change, and results in a perspective tilted towards structure and passivity. This version of institutionalism could not explain change (DiMaggio & Powell, 1991; Ledford et al., 1989), or more precisely, divergent change (Greenwood & Hinings, 1996). This tension between structure and agency is called in the institutional literature the “paradox of embedded agency” (Seo & Creed, 2002, p. 223).

Multiple literatures have tried to resolve the paradox by shifting the balance towards the middle. Sociologist Eisenstadt (1980) considered both structure and agency in listing a number of factors relevant for change including *institutional entrepreneurs*, a term that he did not strictly define but used interchangeably with *major elites*. In the institutional literature, DiMaggio (1988) was the first to shift focus towards actors and agency. He adopted the term *institutional entrepreneur* (but did not cite Eisenstadt (1980)) to describe “when organized actors with sufficient resources see in [a new institution] an opportunity to realize interests that they value highly” (DiMaggio, 1988, p. 14). In contrast with economic entrepreneurs who absorb risks for financial gain, institutional entrepreneurs do so for a larger cause (DiMaggio, 1988).

The term *institutional entrepreneur* has been applied to a range of scales, from single people to groups of organizations (Battilana, 2006). However, most studies have focussed on a broader scale, such as the institution (Lawrence et al., 2010), neglecting the individual perspective and human agency (Battilana, 2006; Lawrence et al., 2010; Reay et al., 2006). I focus on the perspectives of individual institutional entrepreneurs.

Subsequent theorists who were trying to examine agency with an institutional lens coined the related terms *institutional work* (Lawrence & Suddaby, 2006) and *entrepreneurial engagement* (Dorado & Ventresca, 2013). *Institutional contradictions* (Seo & Creed, 2002) and *institutional pluralism* (Kraatz & Block, 2008) also dealt with agency from institutional perspectives. *Intrapreneurship* (Pinchot & Pellman, 1999) and *corporate entrepreneurship* (Burgelman, 1983, 1984) are similar, more popular terms outside the institutional literature. *Social entrepreneurship* as originally defined by Dees (1994) is loosely related but newer, popular senses emphasizing the application of business principles to social problems or finding revenue for social activities—for example, Kerlin (2013)—are not. *Entrepreneurship*, in the Schumpeterian (1983) sense of

putting new ideas into practice in the face of individual and social resistance, is the closest concept outside the institutional tradition.

In addition to coining new terms, subsequent theorists have defined *institutional entrepreneur* in slightly different ways for themselves. Defining characteristics on which theorists have differed include intention and impact.

Intention highlights a fundamental difference between ‘old’ and ‘new’ institutionalisms, that is, an explicit discussion about means and ends in the ‘old’ institutionalism and taken-for-granted logics in the ‘new’ institutionalism. However, for this discussion, I believe that in complex systems, means-end frameworks are highly imperfect, and even the most intelligent, competent actors cannot confidently predict all the impacts that they might have, and I therefore consider events in which actors have not clearly outlined their intentions to be worthy of inclusion and study.

The impact dimension of institutional entrepreneurship relates to agency. One popular definition of agency is “an actor’s ability to have some effect on the social world— altering the rules, relational ties, or distribution of resources” (Scott, 2014, p. 94). However, this definition will lead to a focus on “grand accounts” and exclude not only “unsuccessful” institutional change efforts, but the diverse day-to-day instances of agency (Lawrence et al., 2010, p. 52). Most change efforts do not become fully institutionalized and would therefore traditionally neglected by institutionalists (Greenwood et al., 2002). To account for this viewpoint, agency can also be defined as “an engagement with structure” (Cardinale, 2018, p. 135). This definition of agency accords with a view of *institutional entrepreneur* that does not require successful change, as in Battilana et al. (2009) and the perspective I adopt here. None of the sustainability entrepreneurs in this research were engaged in change efforts that they would describe as fully institutionalized, yet they could be highly agentic and otherwise display other institutional entrepreneurship characteristics. I assume that if I want to examine and highlight the competence, creativity, strategy, and practical skills that actors developed and applied to navigate complex organizational and institutional logics, then I must include fine-grained, quotidian activity (sensu Brown & Duguid, 2002/2017) that in a complex system cannot be clearly or simply linked to institutional outcomes. I adopt the position here that successful institutional change is not an essential characteristic of *institutional entrepreneurs*. In general, I use institutional entrepreneurship terms to label institutional entrepreneurship-like phenomena, even if I do not have evidence that the entrepreneurs fully meet all criteria that some scholars have argued characterize institutional entrepreneurship.

Institutional theorists have also added various concepts to their definitions of institutional entrepreneurialism, none of which have been universally incorporated. I find that *institutional logics*, *power*, and the professions can help to contextualize institutional work in a higher education setting.

4.3.2 *Institutional logics*

An *institutional logic* is a shared understanding of what the goals are and how to pursue them, that is, a means-end framework (Battilana et al., 2009). Institutions are not monolithic and

multiple competing *institutional logics* can coexist (Friedland & Alford, 1991) although there is frequently one that predominates (Reay & Hinings, 2005). In emerging institutions, logics will likely be less entrenched, while in mature, stable institutions, for example, higher education institutions, one or more logics will dominate (Maguire et al., 2004). Institutional entrepreneurs articulate an alternative logic. They might use a logic that already exists internally or import an external logic (Rao & Giorgi, 2006). Sustainability entrepreneurs typically use *integration*, importing an external logic and linking it with internal logic (Rao & Giorgi, 2006). “The essence of institutional entrepreneurship is to align skillfully an organizational form and the specific institution it embodies with the master rules of society” (Haveman & Rao, 1997, p. 1614). The idea of *institutional logic* can both help bridge structure and agency and help to further refine the definition of institutional entrepreneur through the concept of *divergent changes*. A *divergent change* breaks with a dominant institutional logic (Battilana et al., 2009). Battilana et al. (2009) argued that an *institutional entrepreneur* must initiate and contribute to implementing *divergent changes* while mobilizing resources.

Environmental field characteristics can include regulatory and technological changes. These can introduce logics that diverge from the dominant institutional logic. The sustainability report introduces a divergent institutional logic. An institutional logic can be all-enveloping and be taken for granted by internal actors. Being exposed to a divergent logic can increase the likelihood of stimulating reflection, questioning or potentially diverging from the existing institution (Battilana et al., 2009).

The organization might not accept the new logic. Alternatively, they might only accept symbolic elements or compartmentalize the new logic (Kraatz & Block, 2008). The argument that corporate sustainability reporting is greenwashing (Font et al., 2012) is an example of this symbolic acceptance. The ideal of the institutional entrepreneur is full integration of the new logic, that is, pluralism (Kraatz & Block, 2008). This classification of “outcomes” which might not ever be clearly achieved—certainly not in a processual view of organizational change—neglects the everyday process of organizational change. I adopt the position that the divergent logic that an institutional entrepreneur contributes to implementing does not have to become fully institutionalized in order for it to be considered institutional entrepreneurship, as in (Battilana, 2006)

4.3.3 *Power and status*

Power is another concept that helps to understand *institutional entrepreneurship*. Earlier North American institutional work in the tradition of DiMaggio and Powell (1983) tended to overlook power (Delbridge & Edwards, 2007). An early conception of power in an organizational context is related to position in a formal structure. The formal structure of an organization is the hierarchy, or organization chart (Meyer & Rowan, 1977). The formal structure is put in place for efficient control and coordination. In practice, organizations are frequently *loosely coupled*: the structure has too many separate parts, control is ineffective, evaluation does not guide decisions, and action does not follow from decisions (Weick, 1976). However, formal power determines the formal allocation of organizational resources, which corresponds to greater, if not deterministic,

control. This sense of power relates to “getting things done,” or agency (Lawrence et al., 2001, p. 629).

The incumbent/challenger dynamic of Fligstein (2001) can help to explain power’s role in opposing change. Higher power actors can be called incumbents. By definition, incumbents benefit from the existing rules and allocation of resources and use them to maintain their dominance (Fligstein, 2001). Incumbents are therefore likely to oppose change and use their greater resources to do that. One of those resources is the status quo (Pfeffer & Salancik, 1978/2003), for example, the existing institution is experienced as an objective reality (Berger & Luckmann, 1990). In these settings, the institutions favour the incumbents and the institutions tend to reproduce themselves (Fligstein, 2001). Higher status individuals can more easily implement divergent logics (Kraatz & Moore, 2002). Challengers, that is, advocates of new logics, frequently have less access to organizational resources and are lower status (Kellogg, 2011) and are possibly more likely to engage in institutional entrepreneurialism (Battilana, 2006). Arguably, if they had high levels of organizational resources, they would not have to act entrepreneurially (Heinze & Weber, 2016).

4.3.4 *The professions*

As organizations mature, power frequently shifts from more functional professions to professions that help resolve uncertainty in the environment (Pfeffer, 1992). For example, in many firms, finance personnel have come to dominate (Fligstein, 1987). Higher education institutions employ multiple professions, with different social statuses. Professors are traditionally dominant but the administrative class is increasingly powerful and in many organizations, outnumber professors (New England Center of Investigative Reporting, 2014; Slaughter & Rhoades, 2004).

Professional subcultures can be stronger than other subcultures within an organization. Dissenting subcultures can be a source of innovation and change, which presents an opportunity for an organization to redefine shared values (Bloor, 1994). One of the persistent failures of STARS—and sustainability initiatives generally—is to engage professors. Professors have a unique subculture that has resisted engaging with sustainability staff or sustainability initiatives themselves. Sustainability entrepreneurs have generally only been able to work successfully with other professional staff, which has restricted the successes of STARS to non-teaching, non-research domains, which are the core, distinctive functions of HEI. I do not discuss these domains or interactions between sustainability entrepreneurs and professors in any detail in Chapter 5.

4.3.5 *Institutional work as cooperation*

Some of the mechanisms of institutional work were articulated in a classic article (Fligstein, 2001) that integrated the social movement literature, drawing heavily from—although with minimal citation of—Tarrow (1994/2011).² Fligstein (2001) started by framing the environment in which institutional entrepreneurs operate, which he later called a strategic action field (Fligstein & McAdam, 2011). The strategic action field comprises rules about how actors interact with one another and how resources are distributed (Fligstein & McAdam, 2011). The

² An alternative explanation was that they were both inspired by a common source.

term shares considerable meaning with other terms such as organizational field (DiMaggio & Powell, 1983), loosely coupled system (Orton & Weick, 1990), game (Axelrod, 2006), and sector (Meyer & Scott, 1983) (this list of synonyms has been proposed by multiple authors including Fligstein (2001)). Although some terms might emphasize one dimension more strongly than others—for example, a game emphasizes rules—they all describe actors intersubjectively framing their interactions with each other in relation to one another (Fligstein, 2001).

In the context of a strategic action field, if a challenger experienced a problem or an injustice, what could they do about it? This situation—upon which succeeding institutional work is based—is a moment of *contention*. Contentiousness is when a less powerful actor makes a new or unaccepted claim that challenges the status quo (Tarrow, 1994/2011). In normal times, the field perpetuates itself. However, there are moments of *opportunity*. An opportunity might arise because of lower costs of collective action, an expanded network of allies, an exposure of incumbents' weaknesses, or the production of appealing ideology (Tarrow, 1994/2011). The point of producing ideology is to motivate people to collective action (Tarrow, 1994/2011). One of the critical pieces of ideology is the framing: translating the initial injustice to something broader and more appealing (Tarrow, 1994/2011). This production of ideology and the mobilization of other resources are key factors of successful change (Fligstein, 2001). Successful change in this case results in changing the field or creating a new field to advance the interests of the challengers.

For action in an organizational context, Fligstein (2001) emphasized the importance of cooperation. Action is frequently a collective action problem involving one set of actors attempting to get another set of actors to do something. For an institutional entrepreneur with formal organizational power, this can be accomplished through coercion and sanction. More typically however, particularly for those with low formal organizational power, entrepreneurs seek cooperation (Fligstein, 2001). Fligstein (2001) argued that the ability to get others to cooperate is a social skill. To induce cooperation, institutional entrepreneurs use their empathic abilities to understand others' perspectives, and their creativity and practicality to create new, positive systems of shared meaning and collective identities with wide appeal (Fligstein, 2001). Perspective taking involves the ability to understand the other party, and in addition, to differentiate and coordinate self and other points of view (Martin et al., 2008). Perspective taking is one of the most important conflict resolution skills (Moore, 1986/2014). Making sense of a situation and producing shared meaning are also skills that institutional entrepreneurs can develop.

The social skill is distinct from formal organizational power. In fact, because people with formal organizational power can substitute organizational resources for social skill, they can achieve the same outcome with less social skill. Fligstein (2001) claimed that in fields in which it is difficult to evaluate performance, and which are rarely threatened, such as HEIs, incumbents do not need social skills. In contrast, those without formal power are entirely reliant on their social skill to induce cooperation. Fligstein (2001) was not arguing that social skill and formal power were exclusive, but rather that they were to some degree substitutable.

To understand the experiences of sustainability entrepreneurs, both the institutional and institutional work perspectives are useful. An institutional perspective is useful to understand why it is so difficult to change organizations and the frustrations that sustainability entrepreneurs experience in trying to do so. The institutional work perspective can be used to elaborate the institutional environments in which sustainability entrepreneurs operate and to understand their agency, strategy, and competence.

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5 Sustainability reporting as institutional work: perspectives of sustainability entrepreneurs

5.1 Abstract

Purposes: To understand the experiences of sustainability entrepreneurs with sustainability reporting at higher education institutions in the Canadian Prairies. To integrate organizational change literature and to label institutional phenomena.

Approach: I spoke with sustainability entrepreneurs at higher education institutions about their experiences with sustainability reporting. I read institutional literature to organize and contextualize the responses of the sustainability entrepreneurs. I analyzed HEI and sustainability reporting databases to understand the population-scale relationship between legitimacy and sustainability reporting.

Findings: Although the outcome of reporting could enable formal organizational change initiatives, the greatest value tended to be in the process of reporting. Sustainability reporting conferred legitimacy to sustainability initiatives that sustainability entrepreneurs used to perform institutional work.

Limitations: Reaching shared understanding about complex phenomena through short conversations between strangers is difficult. This chapter does not capture the full variation of experience of sustainability entrepreneurs, of sustainability reporting, or even of the sustainability entrepreneurs I spoke with. The institutional literature does not decompose the mechanisms of persistence; affixing institutional labels to organizational phenomena is not equivalent to explaining why they persist. Applying institutional work labels to organizational phenomena does not necessarily explain organizational change.

Implications: The relationships between organizational change and sustainability reporting were examined through a framework external to the sustainability report itself: the experiences of sustainability entrepreneurs contextualized with the institutional and institutional work literatures. The examination suggests that the evolution of sustainability reporting could be based on a view of organizational change reliant not just on formal controls but on scripts that are prosocial and grounded in the experiences of staff. These prosocial sustainability scripts can offer insight into how to counter the helplessness and frustration that the majority of employees of large organizations experience.

Keywords: sustainability reporting, higher education institutions, organizational change, STARS, institutional work, Canadian Prairies

5.2 Introduction

This chapter looks at sustainability reporting as a form of organizational change through an institutional lens. The chapter examines 1) the relationship between sustainability reporting and legitimacy, and 2) how sustainability entrepreneurs used that legitimacy to perform institutional work to advance sustainability.

I first review the literature to show how few studies have directly addressed the relationship between sustainability reporting and organizational change in HEI. Institutional perspectives have been used to examine related control systems, but not from the perspective of lower status individuals. I then outline my approach, in which I first query online databases about reputation and sustainability reporting to then contextualize my conversations with sustainability entrepreneurs. I present my findings in two parts. The first part examines the relationship of sustainability reporting and legitimacy in three ways: regional and global patterns of legitimation through density and diffusion concepts, the relationships between sustainability leadership and organizational reputation legitimation, and how STARS provides the influence legitimacy that open organizations naturally seek. The second part examines how reporting contributes to organizational sustainability, partly through formal organizational change processes but largely focussing on the institutional work of sustainability entrepreneurs that STARS enabled. Finally, I discuss these findings in the context of rational control and institutional theory.

5.3 The literature on sustainability reporting and organizational change in HEIs

The literature on sustainability reporting in higher education is relatively young. Until recently, only a small number of journal articles had been published (<200) (Ceulemans et al., 2015): they have appeared in a small number of journals, with lead authors coming from a handful of countries, coming from a limited number of disciplines—mainly environmental studies and engineering—and using a limited variety of methods. The primary gap identified in this literature has been how sustainability reporting relates to organizational change directed towards a more sustainable HEI (Ceulemans et al., 2015). With most scholars focussing on their own methods or frameworks, established sustainability reporting frameworks have not been rigorously studied either. The dominant reporting framework for North American higher education institutions is STARS, created by the Association for the Advancement of Sustainability in Higher Education, and yet STARS has very seldom been the object of scholarly study.

One approach to fashioning a theoretical lens to examine the relationship between sustainability reporting and organizational change is to apply a theoretical lens from another domain.

Institutional frameworks have frequently been used to examine very similar phenomena: ISO 26000 (Bres, 2013; Delmas & Toffel, 2008; Helms et al., 2012) and performance management (Brignall & Modell, 2000; Suthewasinnon et al., 2016; Teelken, 2012). Institutional perspectives are the primary theoretical framings I use in this chapter. In the institutional literature, legitimacy is a central concept. Examining the relationship between legitimacy and sustainability reporting is the focus of the first part of this chapter.

The institutional research literature (and the organizational research literature more broadly) has traditionally neglected the perspective of individuals with lower organizational status; at least until the 1970s, if an individual perspective was adopted, it was that of top managers (Hirsch &

Lounsbury, 1997). With the emergence of the ‘new institutionalism’ in the 1970s, the individual perspective was even more neglected. Part of this is perhaps inherent to institutional theory: it has no basis for individual action (Battilana, 2006). With the emergence of institutional entrepreneurship in the 2000s, one would expect individual action to have received more attention; however, the institutional entrepreneurship literature has traditionally centred institutional or organizational characteristics while defocalizing the individual (Battilana, 2006; Lawrence et al., 2010; Reay et al., 2006). The institutional tradition has also overemphasized the role of actors’ positions in formal hierarchies (Battilana & Casciaro, 2012), which ignores the large variation in actor effectiveness within organizations not explained by formal control over resources. One possible mechanism for this unexplained variation is that individuals integrate their limited Internal resources with external resources to have a disproportionately high level of influence on organizational change. This is the focus of the second part of this chapter: how individuals use the external legitimacy of STARS to advance sustainability, despite not having formal authority over the required resources. The institutional work literature uses the term *institutional entrepreneur* to describe actors who engage with organizational change. This is the origin of the term *sustainability entrepreneur*, which I use to describe those individuals who engage with organizational change towards sustainability.

5.4 Approach

My approach was primarily to talk with sustainability entrepreneurs about their experiences with sustainability reporting and organizational change, and then reflect on those talks using perspectives. I secondarily queried online databases to provide field-scale context. Analyzing a phenomenon at adjacent scales, consistent with systems perspectives, can provide additional insight into context and mechanism.

5.4.1 Field-scale online databases

To estimate the prevalence of sustainability reporting, I queried the Global Reporting Initiative and STARS databases. The Global Reporting Initiative is the standard sustainability reporting framework globally and across all sectors (KPMG International, 2020) and used occasionally in higher education. STARS was developed specifically for use in the higher education sector.

To assess the relationship between organizational reputation and sustainability reporting, I used three indicators of reputation:

- Maclean’s University Rankings (“Maclean's university rankings 2022,” 2021), arguably the best known university rankings in Canada
- Academic Ranking of World Universities (*Academic ranking of world universities*, 2021), arguably the best known university rankings globally
- membership in Canada’s U15 Group of Canadian Research Universities, a collective of universities, “home to world-class researchers using state-of-the-art research infrastructure to make ground-breaking discoveries” (U15 Group of Canadian Research Universities, 2021).

I queried these three online data sources and then quantified their association with sustainability reporting. I quantified the association between a school’s ranking and whether it had submitted a

sustainability report by calculating the rank-biserial correlation coefficient (r_{rb}). r_{rb} indicates the strength of association between a binary and an ordinal variable. I quantified the association between a school's membership in the U15 and STARS reporting with the mean square contingency coefficient (Φ), which is appropriate for two binary variables. I calculated Φ and r_{rb} in R (R Core Team, 2021). The values were scaled between 0 and 1, where 0 indicates no relationship, and progressively larger values indicate stronger relationships.

5.4.2 *Conversations with sustainability entrepreneurs*

5.4.2.1 *Participants*

I held conversations with nine sustainability entrepreneurs from seven higher education institutions across Alberta, Saskatchewan, and Manitoba. The primary selection criteria were willingness to participate and using STARS. I identified these individuals as sustainability entrepreneurs in several ways: they had a job title with the word *sustainability* in it; they were referred, for example, someone told me that they were the campus sustainability champion; or I had direct knowledge of their work. All were professional staff or managers; none were professors. When attributing quotes in the text, I typically refer to them individually by their job title, for example, coordinator, director, or officer.

5.4.2.2 *Conversations*

I used conversation guides to structure the conversations; one that I frequently used for sustainability professionals is shown in Appendix C. I emailed the guides to all participants before the conversation.

All conversations took place in person, except one by phone. Most occurred on campus, but some were at the participants' homes or in a public space. The conversations were held in the summer and fall of 2016. Interview duration averaged $1.5 \text{ h} \pm 0.5 \text{ h}$.

My approach to the conversations initially, was to sequentially move through the questions in the conversation guide without any departures. The first interview was a "test and fail" of this approach: it failed, sucking energy from the conversation and making both of us miserable. I therefore revised the interview approach. For conversations with the remaining sustainability entrepreneurs, I used the conversation guide as a starting point. I asked follow-up questions and focussed more on conversational flow.

Most sustainability entrepreneurs had read the guide. I did not record their answers to the question of whether they had read the guide, as I typically asked it during the opening while setting up, but I would guess all had at least skimmed it. Some were very prepared for certain questions. Some sustainability entrepreneurs answered questions from the conversation guide without verbal prompting.

5.4.2.3 *Transcription*

I transcribed the recordings of each conversation. Defining the bounds of speech is largely arbitrary and guided by convenience. I document some of these choices below. I first transcribed everything that I could hear and make sense of. I then edited the transcription for increased clarity. The most frequent style decisions are described below. I did not perfectly adhere to these guidelines and there are many exceptions to all of them.

In general, I did not transcribe:

- pauses, filled pauses, or partial words
- changes in vocal quality, for example, tempo, volume, or pitch. However, I did use exclamation points if I felt they captured some of the flavour of the utterance, I frequently italicized words that the speaker emphasized, either through elongation, pauses, or volume changes, and noted laughter.
- non-lexical phenomena, for example, gestures or facial expressions

After transcribing the conversation, I then edited it twice to reflect the conversation as best as I could:

- I added punctuation
- I removed false starts (i.e., phrases of a few words that didn't connect to the subsequent phrase), repetition, and truncated words
- I did not add words. If I did add words, they are indicated with square brackets

5.4.2.4 Analysis

After completing the transcriptions, I coded them. Before the conversations, I had developed a set of variables of interest and likely potential values (themes and preliminary coding structure). Through the conversations themselves and the process of rereading and coding them, I further developed and revised the set of variables and values. I further conceptualized the codes by iteratively reinterpreting the transcripts and reading the literature. As concepts emerged and became discretized, I labelled them with terms from the academic literature. After I selected institutional perspectives to interpret the conversations, I relabelled the themes as types of institutional work from a classification developed in Lawrence and Suddaby (2006). My rationale was that labelling and providing context from the literature would add value to the interpretation. As the discussion was becoming overly long and not all the previously labelled themes fit into the institutional work classification, I removed multiple themes from the discussion. I removed these themes to conform to the constraints of academic writing and a more coherent narrative, not because they did not capture relevant experiences.

5.4.3 Limitations

The scope of this study is limited to understanding particular human experiences as the sustainability entrepreneurs understood them and articulated them to me. This method allows only a study of words. I did not study behaviour, cognition, or emotion, except as participants were willing and able to verbally articulate them. This is a very limited way of studying non-verbal phenomena because they are not equivalent to their verbal representations, for example, beliefs are not equivalent to expressed beliefs. Most organizational behavior is mindless, and many employees are not consciously aware of many of the routines they enact (see for example, Alvesson & Spicer, 2016; Langer et al., 1978; Weick & Sutcliffe, 2006).

This study is subject to the same limitations facing all scholarship, which are only now starting to be recognized in some fields. Scholarship has many sources of variation in quality, some are recognized to be poorly controlled, but many are unrecognized and therefore uncontrolled. Science is facing fundamental problems: its low reproducibility, its inefficient governance and quality control, and its role in society (Mirowski, 2011; Saltelli & Funtowicz, 2017). Medicine was the first field to acknowledge the prevalence of ‘wrong’ findings (Ioannidis, 2005), respond with meta-research—the application of scientific research norms to the study of scientific research itself with the aim of testing and improving those norms (Ioannidis et al., 2015)—and rigorously engage with low reproducibility. The simplest form of empirically testing the application of inferential norms to a limited set of observations is replication. The replication crisis is the most visible, widely recognized, and most active area of scientific meta-research and has expanded to non-natural sciences, particularly psychology (Aarts et al., 2015; Yong, 2012). However, the social sciences have generally not engaged with the modern replication crisis (Freese & Peterson, 2017; Schmidt, 2009).

Organizational research is replete with “folklore” passing for received wisdom (Hubbard et al., 1998, p. 244). Hubbard et al. (1998) estimated that 95% of empirical research in this field was uncorroborated. Hubbard et al. (1998) and Tsang and Kwan (1999) outlined problems with organizational research methods and argued that the field required greater replication. Both these articles are 20 years old, but the field has seemingly changed very little. I searched for replication in organizational studies, and skimming through the results, could find little outside of industrial or organizational psychology (Web of Science query 2020-05-14, topic = organization + replication). Even recognizing the severe limitations of this tiny search, replication appears to be outside the interests of most organizational researchers. The paucity of articles is not evidence that organizational research does not face the same fundamental challenges as medicine or is exempt from empirical examination of its own research norms. It simply indicates that organizational researchers have comparatively little information on the subject. This is unfortunate because replication is the simplest form of feedback for research, and feedback is the most important predictor of domains of expertise that improve and those that do not (Dawes, 1994). With verification, the research quality of a field improves (Kiri et al., 2018). Without rigorous feedback, bad ideas keep circulating in the field (Ioannidis, 2005). This is not evidence that organizational research is full of bad ideas; however, there is little evidence that the field has used one of the most effective tools to remove them.

For qualitative researchers, generalization is a controversial subject (Polit & Beck, 2010). Inference is central to the qualitative process: “Just as with statistical analysis, the end product of qualitative analysis is a generalization, regardless of the language used to describe it” (Ayres et al., 2003, p. 881). Moving up the inference ladder from indeterminate experience is the same challenge facing the natural sciences, although, unlike some natural scientists, qualitative researchers are unlikely to describe the challenge in terms of a crisis. Qualitative research comprises many prescriptive norms of inference and criticism of these norms, but little empirical examination, qualitative or otherwise, of these norms.

Sustainability units have varying levels of staffing but are frequently one person, so in many higher education institutions, the unit and individual scales are equivalent. Below, I refer to both as intraorganizational scales, even if in some cases they are not equivalent.

5.5 Findings

I present the findings in two parts. The first part is a field-scale examination through an institutional perspective of the relationships of sustainability reporting with legitimacy and reputation. The second part is an intra-organizational-scale examination of the institutional work that STARS enabled from the perspective of sustainability entrepreneurs; this part summarizes and names some of the impacts of STARS.

5.5.1 Field-scale context

5.5.1.1 Sustainability reporting is increasingly legitimate in higher education

Legitimation and *institutionalization* are largely synonymous concepts in the institutional literature: they both describe an organizational phenomenon assuming a *taken-for-granted* character (Lander & Heugens, 2017; Suchman, 1995). In both institutional and ecological perspectives, legitimation is one of the dominant mechanisms of organizational change and is expressed through the density dependence theory (Carroll & Hannan, 1989; Haveman & David, 2008). Density is the number of organizations with a given form (Carroll & Hannan, 1989; Hannan & Carroll, 1995). Density dependence predicts that legitimation increases with density up to a certain threshold, after which other processes become dominant (Hannan & Carroll, 1995).

Density, according to density dependence theory, is an indicator of legitimation (Carroll & Hannan, 1989; Scott, 2014). Density is measured as a simple count of the organizational phenomenon and is therefore equivalent to a simple diffusion measure, that is, density, legitimation, and diffusion might not be conceptually equivalent, but all have used a simple count as an indicator. Sustainability reporting in higher education globally has a low density and by this measure, has achieved low levels of legitimation. Globally, less than three percent of higher education institutions have completed sustainability reports, as shown in Table 5.1. Reporting has varied regionally, with reporting rates highest in Northern Americaⁱ, where 505 higher education institutions (22%) have submitted reports to STARS ([query 2020-09-26](#)). In Canada, out of 94 member institutions of [Universities Canada](#) and 136 members of [Colleges and Institutes Canada](#), 54 HEIs (23%) have submitted reports since 2011 ([query 2020-07-13](#)). The Global Reporting Initiative was less frequently used in the education sector, with only 97 HEI submitting GRI reports, all but eight outside Northern America ([query 2020-09-26](#)). These density figures suggest that globally, sustainability reporting is partially legitimated, with Northern America the region furthest along the diffusion curve.

Table 5.1. Count of HEI GRI and STARS reports by region

Region¹	STARS	GRI²	HEI³
Africa	0	0	1709
Asia	4	14	7742
Europe	7	41	4062
Latin America & the Caribbean	3	31	3886
Northern America	505	6	2259
Oceania	1	5	145
	520	97	18094

¹ Regions are from GRI and don't exactly match regions used by STARS or WHED

² GRI also housed non-GRI reports from 67 organizations which are excluded from this tabulation

³ query WHED.net 2020-09-27

The historic diffusion patterns of sustainability reporting in other sectors can shed light on future diffusion in higher education. Sustainability reporting has grown rapidly as an organizational practice in the past decade (KPMG International, 2020; United Nations Environment Programme et al., 2013). Early industry surveys showed that organizations typically realized several benefits, particularly in managing reputation and risk; driving innovation; engaging with employees, stakeholders, and the community; monitoring progress and identifying areas for improvement; and in demonstrating accountability to stakeholders (KPMG International, 2013). These benefits could all be labelled technical performance factors since they improve performance in desired areas. More recent growth in reporting includes a significant portion of voluntary disclosures due to, for example, pressure to conform to “global norms,” increased pressure from investors, and consumer preferences (KPMG International, 2020), all of which can be labelled institutional factors. This transition, from technical factors to institutional factors as incentives for adoption, is predicted by the institutional perspective: early adopters tend to be driven by technical factors and later adopters tend to be driven by institutional factors (Tolbert & Zucker, 1983). This is because adoption occurs in an institutionalized context which rewards conformity by conferring legitimacy to the adopting organization (Meyer & Rowan, 1977). As the new form is adopted by more organizations, the pressure for—and value of—conformity increases (Suchman, 1995). This drive to conform is called *isomorphism* (DiMaggio & Powell, 1983). These institutional factors drive diffusion to rates above what technical performance considerations would predict (Cole, 1985; Guler et al., 2002; Staw & Epstein, 2000).

If diffusion of sustainability reporting in higher education follows the diffusion patterns of other sectors, it will continue to experience rapid growth, significantly driven by institutional factors. Figure 5.1 indicates the historic growth of STARS reporting, showing upward movement along a diffusion curve. Alonso-Almeida et al. (2015) have compared the diffusion curves of GRI in higher education with those from other sectors, such as healthcare and non-profit, and concluded that sustainability reporting in the higher education sector is in an early stage of diffusion. According to institutional theory, many higher education institutions that have adopted sustainability reporting have been significantly motivated by technical performance, and as

sustainability reporting in higher education is still early on the diffusion curve, much of its future growth will be driven by institutional factors and the desire to conform.

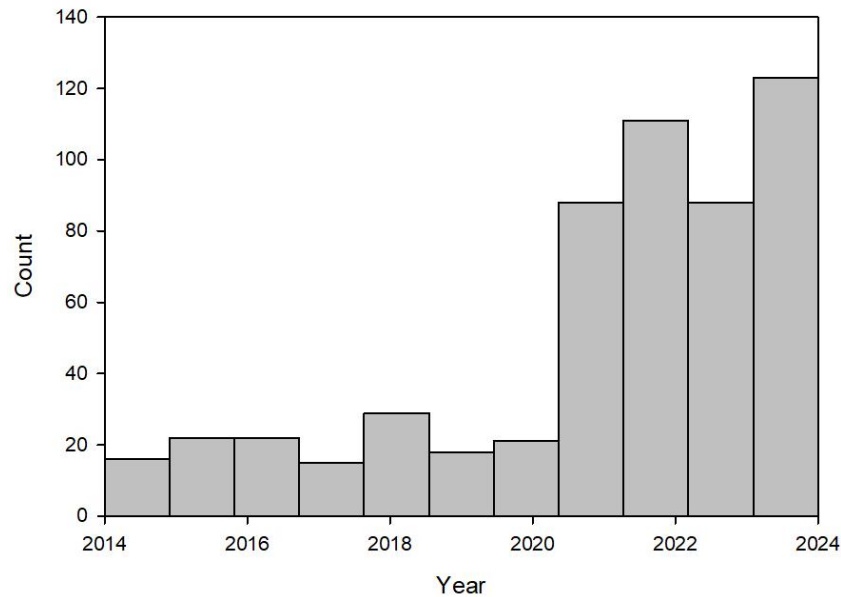


Figure 5.1. Histogram of STARS reports current expiry dates

Note. This figure does not show the number of reports completed in each year.

5.5.1.2 Sustainability leaders have better reputations, enabling diffusion

STARS reporters tend to have better reputations relative to other HEIs. Reputation can be defined as an imperfect indicator of quality and ability that grants earned rewards (Washington & Zajac, 2005), that is, it is an assessment of performance conducted by external raters with incomplete information. STARS reporting was related to reputation, as indicated by league table position in university rankings, and by membership in the U15. The association between *Maclean's* ranking and STARS reporting was relatively strong ($r_{rb}=0.56$). The translation of a correlation coefficient to an interpretive label is arbitrary and context specific (see Funder and Ozer (2019) for a thoughtful discussion). A correlation of 0.56 has been labelled “moderate” (Evans, 1996; Overholser & Sowinski, 2008), “large” (Gignac & Szodorai, 2016; Lovakov & Agadullina, 2021) and “very large” (Funder & Ozer, 2019). I consider $r_{rb}=0.56$ relatively uncommon for field-scale HEI sustainability data and a “strong” association label is reasonable. The association between AWRU ranking and STARS reporting was also large ($r_{rb}=0.44$). Twelve of the U15 had reported to STARS ($\Phi=0.34$),ⁱⁱ which can be labelled a moderate association. The three U15 universities that had not submitted to STARS had completed the Campus Sustainability Assessment Framework (Sierra Youth Coalition, 2011), so all 15 of the U15 had completed some type of sustainability reporting.ⁱⁱⁱ According to these limited measures of reputation, sustainability reporting is positively associated with a better reputation. This is consistent with Kim and Kraft (2017), who found LEED building positively associated with reputation.

Within the population of STARS reporters, some HEIs have even better reputations, and are sustainability models. For example, 13 of the U15 could be considered leaders in adopting high level sustainability initiatives (Beveridge et al., 2015). The reputation of sustainability leaders influences legitimation. Organizations with the best reputations in a field who are early adopters and champions of a new form can legitimize it and encourage adoption by organizations with inferior reputations (Heinze & Weber, 2016). This interpretation was corroborated and further illuminated by sustainability entrepreneurs. One sustainability officer said, “We often look at UBC or Harvard and we’ll drool because we think they’re amazing.” A director said, “The larger universities in Canada and the United States—UBC—are doing a great job. I actually go onto their sites and pick off different things that we can do here.” UBC was mentioned with a positive valence in four conversations. The universities modelling sustainability initiatives are also among the most prestigious universities in the world. From an institutional perspective, universities with top reputations such as Harvard and UBC also being sustainability leaders has helped legitimize sustainability initiatives and facilitated diffusion of sustainability practices to other higher education institutions. This is also consistent with patterns in other sectors: since 2011, >90% of the largest 250 companies in the world have reported on sustainability (KPMG International, 2020). Smaller companies mimic the managerial practices of larger companies, so smaller companies have increasingly reported on sustainability too (KPMG International, 2020), assuming that in the corporate context where growth and size are key measures of success, larger corporations have better reputations than smaller corporations.

5.5.1.3 *STARS legitimates HEIs’ sustainability efforts*

Sustainability reporting legitimizes the claims of higher education institutions to being sustainability leaders. Higher education institutions frequently claim a leadership role in their communities over many social challenges, and sustainability is another domain over which HEIs have claimed jurisdiction. The 19 international higher education sustainability declarations that hundreds of HEIs signed between 1984 and 2014 (Tilbury, 2014) declare the critical leadership role that HEIs must play to solve the sustainability challenge. HEIs are open institutions (*sensu* Brunsson, 1989), and incorporating external logics builds alliances and *influence legitimacy*, which is when external constituents perceive the organization as responsive to their interests (Suchman, 1995). Social movements are a source of important external logic: they contest existing logics and create new logics with high moral value (Rao & Giorgi, 2006). The sustainability logic has high moral value and those concerned with sustainability are an important external constituency for higher education institutions. Sustainability reporting is itself an external logic that higher education institutions can use to demonstrate and legitimize their sustainability efforts to sustainability constituents.

5.5.2 *Intraorganizational scale outcomes and processes*

5.5.2.1 *The outcomes of sustainability reporting*

The value of a sustainability report is widely assumed to derive from completing the report, so that its findings can, for example, be communicated to stakeholders or form the basis for a rational organizational change process. For the reporting to accomplish anything, someone has to do something with the indicators (Behn, 2003). Sustainability entrepreneurs did not track readership but most thought readership was low among the public and broader campus

community, but high among professional peers. One coordinator said, “The people who read the report tend to be peers at other institutions. Or our building systems manager might spend a lot of time on the section on energy and greenhouse gas emissions because he works with that, and he gets the numbers.”

Some reports successfully provided the basis for further sustainability planning, typically by selecting a subset of indicators for inclusion in a plan. One former director said, “We were able to use STARS as the planning basis for renewing that sustainability vision and turning it into a more action-oriented strategy that talked about who was going to do stuff, and when, and what it would cost, and what the return on investment would be.” Another coordinator said, “We used a subset of the STARS metrics for our sustainability strategy... We’ve starting to do a bunch of the actions that are in the strategy and in some of the areas, we’re seeing just phenomenal progress. We got a green light to redesign our waste system and we’re sending 20% less waste to landfill versus the year prior with more people and more buildings at the university than we had the year prior.”

These impacts from the ‘outcome’ of reporting are important and likely not uncommon. However, the sustainability entrepreneurs generally found the most value in the ‘process’ of reporting, which enabled them to perform institutional work, some of which likely contributed to the occasions where sustainability reporting was successfully translated into formal organizational change processes. To describe how the sustainability reporting process could enable organizational change, it is necessary to first describe the challenge facing sustainability entrepreneurs who do not control the resources required to pursue their goals.

5.5.2.2 Sustainability entrepreneurs need to access resources they do not control

Sustainability offices tend to have relatively low status within their organizations and access to fewer organizational resources, for example, they have smaller budgets and fewer staff. *Status* can be defined as a non-merit-based socially constructed rank that grants *privileges* (Washington & Zajac, 2005). *Privilege* can be defined somewhat tautologically as non-merit-based reward (Washington & Zajac, 2005), that is, privilege is a consequence and downstream indicator of status. For example, someone born rich has high status, and has access to resources not accorded to someone born poor, independent of their social contributions. I use the term status to characterize the rank of sustainability units because the ranking system within organizations is widely recognized, and the allocation of organizational resources has more to do with the legacy of prior conditions than relative current or predicted performance, that is, organizational resources can be considered as privileges conferred according to status.

Sustainability challenges and organizational change efforts are both typically collective action problems involving one set of actors trying to get another set of actors to do something. Sustainability entrepreneurs can only achieve their objectives through other people, and they cannot compel obedience in case of resistance. As one coordinator described the challenge, “This isn’t part of most people’s jobs, this is on the side of their desks, we’re coming to them and saying, ‘Hey, in addition to everything you do, we also need all of this, and we need it yesterday.’” Institutional entrepreneurs face a daunting challenge: to “work within formal decision processes without formal authority in the face of ideological resistance” (Heinze &

Weber, 2016, p. 6). Focussing on a nonrational organizational environment frustrating change is the focus of the institutional perspective. Mechanisms frustrating change are poorly specified in the institutional literature but include the "liability of newness" (Stinchcombe, 1986, p. 21): new organizational forms fail at higher rates than older ones (Hannan, 1989) simply because they are new. Change proposed by those with lower power or status is even more difficult, as illustrated by the challenger-incumbent dynamic proposed by Fligstein (2001). Incumbents are those who benefit from the status quo, that is, they have privileges including differential access to organizational resources, and can use those resources to frustrate any challenges to the status quo not in their interests. Conversely, if incumbents would like to implement change, they can use sanction and coercion to achieve their aims (Fligstein, 2001). Low status challengers, on the other hand, cannot compel change: they have to seek cooperation (Fligstein, 2001), which goes hand in hand with institutionalization (Phillips et al., 2000).

Status is multidimensional and sustainability entrepreneurs do not always have low status in all dimensions. Two of the sustainability entrepreneurs I spoke with were Directors of Facilities at smaller HEI, with strengths on the operations dimension of sustainability. Two other entrepreneurs were Directors of Sustainability, which as one said, "is the top middle management level at the university," and indicates an organizational decision to invest the sustainability unit with greater job title status relative to, for example, 'coordinator' or 'professional.' However, in all cases but one, the sustainability units were less than 4 Full-time Equivalents and had a limited dedicated budget. In all cases, sustainability entrepreneurs required organizational resources outside their formal authority and relied on collaborative approaches to access them.

5.5.2.3 *Collaboration*

Sustainability entrepreneurs, as lower status challengers, seek change through collaboration. Collaboration can be a form of institutional work, particularly for lower status actors (Lawrence et al., 2002). *Collaboration* can be defined as cooperation independent of market or hierarchical control (Lawrence et al., 2002). As one former sustainability coordinator said, "You can measure people's power by the size of their budget in a lot of ways in an organization. When you are the sustainability guy and you got a miniscule budget, that reflects your lack of power...you're meant to be in a position where you collaborate [for example] with the director of facilities who has a gargantuan budget." These comments were mirrored by a director of sustainability: "The office of sustainability is a pretty tiny unit. We have very little direct influence but a medium to high level of indirect influence, so thinking about how to push on that [change] lever, you're not going to push on it by being adversarial or you're not going to push on it very many times before people hate you [laughs] and cut you out."

To encourage collaboration, institutional entrepreneurs use their empathic abilities to understand others' perspectives, and their creativity and practicality to create new, positive systems of shared meaning and collective identities with wide appeal (Fligstein, 2001). Perspective taking involves the ability to understand the other party, and to differentiate and coordinate self and other points of view (Martin et al., 2008). Perspective taking is one of the most important conflict resolution skills (Moore, 1986/2014). Sensemaking in a way that produces shared

meaning is a skill that institutional entrepreneurs can develop. One coordinator described their perspective taking strategy:

So, you want to pursue an alternative transportation program of some type and it makes sense to you for whatever reasons you think are most important. But whatever reasons you think are important don't matter [to the other person]. You gotta figure out what reasons *that* person thinks are important and connect with them on *that* basis even if you think that's frivolous or superficial or missing the bigger picture. And you want to identify, 'What is the common basis for understanding between us here?' and go for that... Just talk about why they think it's important. And you just try to position yourself in alignment with whatever strategic objectives you can. And to the degree you're able to do that, then advancing your work becomes advancing the strategic mission of the organization as a whole.

In this illustration, the coordinator would be making much more of an empathic effort than their conversational partner. However, legitimation is about mobilizing information and expressing it in a logic that resonates with a particular constituency (Birkinshaw et al., 2008). Sustainability entrepreneurs, in the examples discussed in this chapter, typically *integrate*, in which an entrepreneur imports an external logic and links it with internal logic (Rao & Giorgi, 2006). Legitimizing sustainability is a central challenge for sustainability entrepreneurs and using a conversational partner's own logic to sway them is a strategy that increases the chance of cooperation. To form a collaborative relationship can require a high degree of skill that is not captured by this institutional language. The skill is also critical: Haveman and Rao (1997, p. 1614) called the ability to align an organizational form with the master rules of society "the essence of institutional entrepreneurship."

The general institutional skill can also be further decomposed through linguistics concepts. Adjusting one's communication to one's conversational partner is called accommodation. One type of accommodation is searching for common ground, or grounding. Grounding helps to meet our needs as communicators: it helps to coordinate information exchange and it helps to build trust, commitment, and intimacy (Enfield, 2006). The benefits of grounding are cumulative, that is, it is an investment in future communication (Enfield, 2006).

Some sustainability entrepreneurs used the same terms used in the conversation guide, or terms that I would introduce during the conversation, and I do not believe they would have naturally chosen these terms for their own sensemaking (I would not use those terms again either). The phenomenon of adjusting one's language to make information content more accessible is called recipient design (Sacks et al., 1974). A related concept is lexical entrainment, which is when conversational partners start to use the same words for the same referents during a conversation (Brennan & Clark, 1996). Lexical entrainment is part of developing a shared lexicon and understanding, and is therefore important factor for facilitating effective communication (Garrod & Anderson, 1987). These sustainability entrepreneurs so naturally and quickly adopting my words is an indication of their willingness and skill to understand others' perspectives, and their motivation to facilitate the conversation for their partner and establish meaningful connection with them.

5.5.2.4 *Forming relationships and normative networks*

The opportunities to form relationships during the reporting process were what all sustainability entrepreneurs valued about sustainability reporting. It was typically the first and biggest positive impact they mentioned. Even in small HEI with a relatively small number of staff and faculty, the reporting allowed new, valuable relationships to form. As one sustainability coordinator said, just opening the door, literally and metaphorically, was important: “We were given a reason to form some of those relationships and contacts. We wouldn’t otherwise have had a reason to go knocking on their door, which is huge, just starting that conversation. Even if it’s ‘No, we’re not doing anything, we have *no* idea what you’re talking about.’ That’s a great starting point [laughs].” This first step can be called the creation of a linkage in an intraorganizational network, which is the structural foundation of resource exchange and value creation within the firm (Tsai, 2000). By reaching out to different units and forming more interunit linkages, the sustainability office occupies a more central position in the intraorganizational network. A more central network position increases the sustainability unit’s access to useful knowledge and capacity for innovation (Tsai, 2001). In the formal hierarchy, sustainability offices might have lower status, but sustainability reporting was a tool that sustainability entrepreneurs used to create a more flexible, informal network in which they could occupy a more central position. This network could also be considered a *free space*, within which communication and collaboration outside formal channels can occur (Rao & Dutta, 2012) but critically, the free space is sanctioned by the organization (Heinze & Weber, 2016).

Sustainability reporting also provided an opportunity for the sustainability entrepreneur to learn about the perspectives of their contacts. One former director said, “The best thing about STARS was, it gave me reason to reach out to people and ask questions, and to listen, and really focus on being a good listener and understand where people were at and where they wanted to go.” Shared understanding and vision are forms of cognitive capital (Nahapiet & Ghoshal, 1997). Structural links and cognitive capital help build trust and shared norms, which are forms of relational capital. All these forms of social capital can reinforce each other and be used to integrate and exchange information, facilitate action and innovation, and create value (Tsai & Ghoshal, 1998).

Social capital is the basis for organizational change (Tsai & Ghoshal, 1998) and the social capital developed through sustainability reporting enabled the formation of a normative network.

Constructing a normative network is a type of institutional work that involves connecting diverse actors with independent interests into an association of peers (Lawrence & Suddaby, 2006). This normative network can legitimate new practices and then monitor and evaluate them (Lawrence et al., 2002). The normative aspect derives from the scientific and technical knowledge embedded in the reporting template (Guler et al., 2002). Sustainability reporting enabled the formation of positive relationships in a normative network in which sustainability entrepreneurs could occupy a central position. This normative network enabled entrepreneurs to access resources outside their authority and perform further institutional work.

5.5.2.5 *Defining and advocating*

Sustainability reporting helped to define organizational status which could then be used to advocate for sustainability initiatives. *Defining* is a form of institutional work that involves the

construction of rule systems to define membership or status hierarchies (Lawrence & Suddaby, 2006). *Advocacy* is a form of institutional work that involves the mobilization of support (for example, agendas and resources) through persuasion^{iv} (Lawrence & Suddaby, 2006).

Sustainability entrepreneurs defined and advocated in the collaborative style discussed above: not using their own logic but the logic of formal organizational leaders. Leadership in large organizations is predominantly held by those with financial expertise, particularly accounting (Fligstein, 1987) and as a result, the logics that predominate at formal leadership levels reflect financial instrumentality. The key to incorporating alternative values is to repackage them as tools such as professional performance management (Zilber, 2002). STARS embodied logics used by organizational leaders making them more comprehensible to them.

STARS embodied a logic of competition that resonated with HEI upper management and executives. STARS reports include both a score and a rating; all the details are visible on a public database, allowing comparison with other higher education institutions. One coordinator said, “Universities are competitive, so they also like to see what other schools are doing... Often a question that we get is, ‘How are we doing compared to so and so?’” Another coordinator said, “It doesn’t even matter if the methodology of the rating system is worth a damn. If there’s a list, you want to be at the top.” Constructing and publishing league tables of public sector performance faces methodological hurdles (Goldstein & Spiegelhalter, 1996; Leckie & Goldstein, 2009; Smith, 1995). However, league tables minimize the interpretive work required of readers (Jackson, 2011) and most importantly, they embody a logic of competition that resonated with important internal constituencies. League tables enabled sustainability entrepreneurs to more effectively communicate with organizational leaders using their own logic. Speaking about how they used league tables to make their point more comprehensible, one former director said, “Here’s where we’re starting from, here’s where we sit in our pack of peers, and if you—the board—support us doing all these things, then we should be able to bump up from a silver level to a gold level by the next time we renew.” The definition of organizational status, that is, the league table, is a population-scale phenomenon. The advocacy for organizational resources occurs at intraorganizational scales. STARS created a feedback loop that could operate at both scales; the cross-scale linkage provided a channel for more effective advocacy by sustainability entrepreneurs.

STARS reduces uncertainty related to sustainability, manages related risks, and legitimates those risk management efforts. Risk management is another of the logics of formal organizational leadership. In environments with high levels of uncertainty in the production models and outcome indicators, such as public sector organizations, it is particularly important to conform to socially accepted techniques, which is called *procedural legitimacy* (Suchman, 1995). Procedural legitimacy can be gained by using the techniques sanctioned by professional groups. STARS was developed by sustainability professionals and is becoming the standard for sustainability professionals at North American HEI; it can therefore confer procedural legitimacy to organizational efforts to reduce risks from sustainability challenges. STARS can be used in a risk management logic, as one officer described:

One of the ways of managing risk is managing through sustainable practices. If you use sustainable solutions, it can reduce your risk... So reputational risk, for example... If people are attracted to us because of our sustainability performance, then we need to have things in place to communicate that to people. So STARS is actually in the institutional risk management strategy as one of the mitigation techniques.

However, there are limits to STARS' legitimation, and simply using the language and logic of formal organizational leadership does not mean that it is equivalent to them. One officer said "I wish that it was more important to more people. It's not something for example, that has made its way into our president's speeches or our vice-president's speeches when they're engaging with the community." One coordinator said that "To really leverage that [sustainability] information, you need to unify it with financial data," implying that traditional accounting and performance management were still privileged. That so many public sector agencies have legitimated performance measurement systems that have not resolved the inherent challenges of measuring performance suggests that the incomplete legitimation of sustainability reporting is more due to institutional factors than technical factors.

The lower status of sustainability entrepreneurs is not fixed and might increase in the future if sustainability becomes more important to funders or important constituents. Reducing uncertainty is a method that professional groups, such as accountants, have used to gain power in organizations (Crozier, 1964; Hinings et al., 1974). The professional groups that are perceived to resolve the most important sources of uncertainty will gain power relative to other professional groups. The extent to which sustainability will be considered a significant source of uncertainty in the future is unknown, but this is a mechanism that could potentially enable sustainability entrepreneurs to elevate their status. An institutional perspective would predict that power would shift to sustainability entrepreneurs as their logic becomes better able to resolve new important sources of uncertainty.

5.5.2.6 Educating about sustainability

STARS allowed sustainability entrepreneurs to educate their colleagues about sustainability. *Education* is a form of institutional work that involves developing the skills for new practices and the understanding about how those practices relate to organizational control mechanisms (Lawrence & Suddaby, 2006). Sustainability entrepreneurs could broaden their colleagues' understanding of sustainability. One director said, "Often people hear sustainability, and they think composting and recycling and energy, and they don't think about any of the social issues, they don't think about the full scope of what sustainability means... [STARS] created space for a conversation that had been really difficult to start before that." One of the most important dimensions of a broader understanding of sustainability was non-sustainability staff understanding how sustainability related to their work. Speaking of how effectively STARS could be used for this, one manager said, "We used a widespread engagement approach to STARS and that was just key in expanding that conversation of what sustainability is on campus... it really permeated the organization and people could see sustainability in their work—that was pivotal in moving sustainability to be a strategic priority... it's more than 80% of

staff agree or strongly agree that their everyday actions reflect sustainability values and that the college should make sustainability a priority in operations.”

5.5.2.7 *Constructing identities*

Sustainability reporting helped to construct professional identities, of both sustainability professionals and their colleagues. *Constructing identities* is a form of institutional work that involves describing the relationship between an actor and the field in which they operate, frequently in the form of developing a profession (Lawrence & Suddaby, 2006). STARS helped to develop the identity of the sustainability professional. One former coordinator explained the mechanism:

In a lot of ways, STARS as a rating system and AASHE as an organization have done so much to professionalize this role of sustainability coordinator. The idea that a college should have an office of sustainability and a sustainability manager... is more widespread as a result of the adoption of STARS. Even if you're doing sustainability work, and even if you're [already] doing STARS reporting, you actually get a point for having a sustainability coordinator. If you're an institution, you're beginning to engage with this, [and find the reporting requirements are onerous] you're like, "Oh look, we can get another point on our assessment if we get a sustainability coordinator *and* we can get them to do the reporting."

Some schools had the opposite trajectory: first creating a sustainability professional position, who then submitted a report to STARS. In both trajectories, STARS helped to structure the daily work and broader direction of the sustainability professional.

Closely related to the education discussed above, the identity of sustainability professionals included helping staff in other units engage with sustainability in their work. STARS helped sustainability entrepreneurs to structure a path for other staff to feel professionally fulfilled and proud of their own work. First, it provided a framework for evaluating and reflecting on their work. As one director recounted:

We asked them, 'So how do you integrate sustainability into your purchasing decisions?' They said, 'We've got a policy that says we'll consider the following when we buy and include some environmental considerations and social considerations along with price'. They do professional development relating to responsible procurement. And in our RFPs, we put in language about 'Tell us about your environmental performance.' And so professionally, they were feeling like, 'Yeah, we *do* this.' But stepping back from all of those valuable things, I asked them the question, 'Are you doing better this year than last year?'—they weren't able to answer that.

STARS could then outline a path for professional development. The director continued, "STARS often aligns with best practice in a given area... Our grounds manager—super into that—he's quite enthusiastic about moving us from the middle level of that credit to the top level. That would be professionally fulfilling for him." Another coordinator said, "And they're proud. Whenever we talk about the food purchasing, one of them lights up and she's like, 'Yeah, we're 34% [verified sustainable or local] now and we're tracking it!'"

The professional development of staff in other units was a source of pride not just for those staff but for the sustainability entrepreneurs who helped them realize it. One director said, “I’m proud of everyone who went through the process of caring enough to figure out how their job could help and contribute. A lot of people have figured that out and have actively tried to make progress.” The sustainability professional identity could also include a sense of collective pride in collective achievements. Another director said, “It’s a lot of [collective] pride there, especially when the utility companies come in and try to figure out what’s wrong with your meters. That was funny but it was good.”

5.5.2.8 Theorizing about sustainability

STARS helped sustainability professionals to theorize about how they could improve organizational sustainability. Theorizing is a form of institutional work that involves sensemaking about causal chains (Lawrence & Suddaby, 2006). One former coordinator described how STARS guided their actions:

STARS as kind of a blueprint for executing sustainability at your campus is very useful because if you're at a loss or not in a position where you know what projects to prioritize next, you could look at STARS, you could look at the metrics that they're assessing and say, 'There's a way for us to get some more points in our STARS rating by pursuing these projects here. And they have some value to us innately as well. Maybe we should do that. We should go that direction.'

Sustainability indicators come to define sustainability and imply future actions. The nature of any control system is that it focusses on what is measurable. Not all sustainability is equally measurable and consequently, some less measurable initiatives will not be prioritized:

The reporting is so strong, that if reporting is a major part of your work, then you begin to strategize and prioritize programs and initiatives that are reporting relevant. And you wind up deemphasizing other things that are not relevant to reporting but are very relevant interpersonally between yourself and other folks you work with at the college.

5.6 Discussion

In the most common logic of sustainability reporting, value derives from the finished report feeding into a formal organizational change process. For some of the sustainability entrepreneurs in this chapter, this logic was correct: sustainability reporting could contribute to formal organizational change processes. However, this perspective privileges the formal hierarchy and its processes. The sustainability entrepreneurs generally most highly valued not the outcome but the process of reporting, in particular the relationships they formed and institutional work they performed. Sustainability reporting provided sustainability entrepreneurs with the legitimacy to perform institutional work. The sustainability entrepreneur could then use their collaborative skills to navigate the extra-rational obstacles to change.

Sustainability reporting gains its legitimacy in part from its consistency with logics from both sustainability and managerial professions. Prevalent in both professions is the logic of rational instrumentalism: present people with enough good information, and they will rationally change their behaviour. Although the sustainability movement has embraced other logics, good faith

appeal to reason is still prevalent: present people with information about for example, impending environmental collapse, and people will rationally change their behaviour to avert disaster. The extension of this logic to organizational sustainability performance is sustainability reporting. Sustainability reporting is also consistent with managerial logics. In modern management, a central idea is *control*, which can be thought of as narrowing the gap between decisions and action (Brunsson, 1989; Simons, 1995). Management control systems go in and out of fashion like all other management fads (Abrahamson & Fairchild, 1999) but financial accounting and performance management style fads have become entrenched as control systems. Those tools are flawed and incomplete, particularly in their neglect of the natural environment (Jones, 2010) and democratic values (Bebbington et al., 2017; Brown, 2009). However, they still disproportionately constitute the control systems used in large organizations. Sustainability reporting mimics management control systems in language, form, and logic, and has therefore become increasingly palatable to formal organizational leaders.

Sustainability reporting also gains legitimacy from its adoption by leaders in the field. Some of the most prestigious universities are widely considered as sustainability leaders. HEI with better reputations more frequently report on sustainability. In the private sector, sustainability reporting is associated with the management practices of top corporations, which can facilitate adoption by smaller companies and large public organizations.

Sustainability entrepreneurs typically have lower organizational status but through STARS, gained legitimacy and greater capacity to perform institutional work. The formal resources required for sustainability reporting are relatively small, compared to, for example, hiring an external organizational change consultant. Yet STARS enabled a variety of practical institutional work that included: the formation of normative networks, a definition of status that could be leveraged for advocacy, educating colleagues about how they could professionally engage with sustainability, and theorizing about means-end relationships to orient action. This institutional work has helped to legitimize and advance sustainability in higher education institutions, including the formal change processes that have been the focus of previous research.

Much of organizational life is *bullshit* (Graeber, 2018; Spicer, 2018). Bullshit can be defined as pointless work that everybody has to do but is not allowed to explicitly recognize is pointless (Graeber, 2018). Large organizations are full of highly educated, critical thinkers, the majority of whom do not find meaning in their work (Aon, 2017; Gallup, 2017). Bullshit can apply to every corporate compliance tool, including sustainability reporting (Laufer, 2003). An organization's natural tendency from an institutional perspective is to incorporate a new logic—such as sustainability reporting—symbolically, rendering more substantial changes unnecessary (Meyer & Rowan, 1977). STARS can provide the symbolic legitimacy but its value in moving beyond symbolism and effecting more substantial changes rests in the institutional work of sustainability entrepreneurs. That institutional work has the potential to help professionals cope with uncertainty and overcome bullshit. Institutional work is the magic that turns bullshit water into agentic wine. This implies another possible interpretation of the measured increase in bullshit work: that it is an indicator of helplessness at the individual scale and the decreasing capacity for organizations to challenge their own norms at the organizational scale. In this interpretation,

bullshit is the inability to effect change or perform institutional work. This line of thinking is similar to the job crafting (Wrzesniewski et al., 2013) idea that individuals might start out in less than ideal organizational circumstances, but by reframing or tweaking their job, can create personal meaning from their work. I want to underline that I think it's important for individuals to take responsibility for individual scale problems under their authority; it's neither healthy nor effective to place the onus for organizational scale changes on individuals who do not have the authority to effect them. However, the essence of institutional work is that an actor is seeking to effect changes at higher scales and the outcome is dependent on factors outside the actor's influence. Translating helplessness into meaning is therefore not an individual scale problem for those who find personal meaning in engaging with problems greater than themselves. When individuals are unable to make any progress on some personally meaningful work in the face of organizational resistance, it is not necessarily because they have poor institutional work skills.

Institutional work is highly skilled, particularly when performed by lower status sustainability entrepreneurs. It required listening, empathy, and perspective taking to understand the conversational partners' perspectives, and creativity and flexibility to differentiate and integrate those multiple perspectives in ways that could achieve multiple objectives at multiple scales, and then synthesize and communicate using the logics of their conversational partners. For sustainability reporting to be effective, the entrepreneurs had to ground sustainability reporting in the daily work experiences and aspirations of their colleagues. They had to come to a shared understanding with their conversational partners about how to professionally engage with sustainability. The conversations could be challenging and sometimes delicate. One sustainability entrepreneur described education as a non-dialectical way of influencing and investing in people's potential. Sustainability reporting has provided a framework to enable these educational moments to take place. To navigate and shape an extra-rational organizational environment, these are required skills.

Conversely, a rational approach is not sufficient for effective sustainability entrepreneurship. A rational approach assumes that the organizational environment is rational and therefore rational skills are appropriate and sufficient. However, the organizational environment is full of individual and collective behaviour that does not conform to rational heuristics. A rational approach does not recognize all this extrarational variation and leaves much organizational variation unexplained. Unfortunately, large organizations, particularly higher education institutions, are full of highly educated thinkers, who have finely honed the rational intellectual skills that are taught and highly valued in higher education. Being unable to explain so much of organizational life, rational approaches are less likely to be effective in shaping organizational environments.

As sustainability reporting evolves, one direction is towards greater technocratic control and standardization, which is typically required to integrate performance indicators into decision making at the upper levels of organizations (Mayston, 1985). This is the default direction in institutionalized environments. However, arguments for less control and centralization are also possible. Performance indicators change the system they were designed to monitor (Campbell, 1976; Goodhart, 1975). As a result, indicators become less effective over time and the number of

indicators proliferates (Meyer & Gupta, 1994). In the institutional perspective, this declining effectiveness is because as a practice becomes institutionalized, it becomes more symbolic (Zbaracki, 1998). This phenomenon of declining effectiveness can also be called surrogation: it is a reflection of natural human biases, and is a pervasive and natural outcome of any accounting (Black et al., 2018; Kahneman & Frederick, 2002). The extent to which reporting minimizes surrogation is a function of indicator users also being indicator developers (Choi et al., 2013), that is, reporting systems should be grounded in the experiences of its users. From this perspective, for STARS to maintain its effectiveness at enabling organizational change, its evolution needs to be tied to the experiences and aspiration of the entrepreneurs and staff who use it.

Higher education institutions are responsive to environmental pressures and house many competing logics. Contradiction can be a source of innovation (Hargrave & Van de Ven, 2009). For example, disagreement among multiple stakeholders during the development of ISO 26000 eventually led to wider consensus over the meaning of corporate social responsibility (Helms & Oliver, 2015). Through STARS, organizations with multiple competing logics could have structured conversations to explore sustainability and the uncertainty associated with engaging with it and during which sustainability entrepreneurs would collaboratively perform institutional work. In this sense, sustainability reporting enabled organizational change based on deliberative democratic values, within a hierarchical organization. Modern organizations are fundamentally anti-democratic, unjust places (Anderson, 2017): this is the essence of managerial control and efficiency. Sustainability reporting uses the same logic of managerial control at organizational and population scales but offers the possibility of substantive change based on democratic values at the intraorganizational scale. This is not a simple chain of causation: democracies are not necessarily associated with effective control and in many HEIs, sustainability reporting has been largely symbolic. However, in this study, the effectiveness of sustainability reporting was correlated with the collaborative institutional work that is foundational to deliberative democratic change. The democratic process of investing in the potential of individual staff and inviting collaboration lays the foundation for effective change based on an alternative model of control consistent with the espoused values of open higher education institutions.

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ⁱ Bermuda, Canada, Greenland, Saint Pierre and Miquelon, USA

ⁱⁱ I did not count the University of Toronto, as neither the main nor Scarborough campuses had submitted a STARS report. However, the Mississauga campus had submitted a report.

ⁱⁱⁱ Data from Beveridge et al. (2015)

^{iv} This definition was originally proposed for the field scale. At the intraorganizational scale, political and regulatory support are less relevant. Their intraorganizational equivalent, that is, a higher authority to appeal to, would be executive or management support.

6 Conclusion

6.1 End of the road

In this dissertation, I discuss a number of metaconcepts, particularly sustainability, sustainability reporting, and organizational change. These concepts are linked by the logic that provided the foundation of this PhD: sustainability reporting leads to organizational change, which leads to sustainability. The logic is a specific form of the rationalistic assumption that knowledge leads to action. I held this assumption close to my heart, despite work experiences clearly demonstrating the decoupling of environmental information and organizational behaviour. The extent to which environmental work can be performed is not a function of better information in a better framework, but a function of influence. And if one views the organization in purely rational terms, then it's difficult to influence others (Brunsson, 1989); one is also unable to explain much of the variation in organizational life. Recognizing the extra-rationality of organizational behaviour is a practical, strategic decision. By assuming that employees are rational actors and writing scripts accordingly, the workplace has become a miserable place for the majority of employees. Scripts that assume that employees are humans capable of prosocial and cooperative behaviour can lead to a very different character of organizational interaction: more uncertain but more human.

Words seem objective when we first learn them but we incorporate and maintain them to transform our inner and outer worlds (Clark, 2011). This engineering of words and worlds is not just iterative, it is recursive: we can actively engineer the tools we use to understand the environment and also engineer the environment to further engineer the tools (Clark, 2011). The same is true of scripts we use to reduce organizational uncertainty. The scripts we choose will recursively shape our understanding and our worlds. Through this PhD, I've come to see some elements of current sustainability practice as seeds of good organizational scripts, not just because of their impact on sustainability performance but because they can embody prosocial, cooperative organizational behaviour.

A major background tension for me in Chapter 2 is: what is the point of everybody making up their own definition of sustainability? I cannot think of another domain with such an intellectual focus on everybody making up their own meaning. Or about which undergraduate and graduate students are compelled to write essays of personal reflection. The main assignment for the only mandatory class for this PhD was for students to individually define sustainability for themselves. From a semantics perspective, I cannot make any sense of it. One person defining a word in an academic article or class assignment does not cause the word to take on that meaning.

Another person defining it in a slightly different way in a different context does not make it so, either. Word meaning is simply a function of usage, which seems incompatible with the denotational focus so prevalent in sustainability education and practice. However, meaning is goal-dependent, according to Wittgenstein (1953/2009). Everybody is personally defining sustainability, so there must be a point. The point is just unrelated to semantics.

Part of the point might be observing a scholarly tradition in the arts and social sciences. Terms are generally loosely defined in the field (Simonton, 2015) and then individual scholars define them more precisely for their own unique purposes.

Another part of the explanation might be a logic that relates individual definitions and aspirations to agency. Agency is essential to meet the sustainability challenge. A professor spoke about how the most important thing for their students to learn about sustainability was a sense of agency: “It *does* make a difference and you *can* have an impact.” Developing a statement of individual aspiration and naming it as sustainability can be considered agentic. In the institutional work perspective, naming is theorizing, and theorizing is agentic. However, this logic does not explain why the sensemaking has to occur at the scale of the individual.

Individually defining sustainability as a strategy to achieving it is missing a big piece of the puzzle: the sustainability challenge is a collective action problem. Whatever the particular definition of *sustainability*, any adequate response to the sustainability challenge requires us to grapple with taken for granted intersubjective realities. In other words, unsustainable practices are institutionalized. Just the idea of challenging unsustainable institutions causes many people to feel fatalistic and lose a sense of agency (Hirschman, 1991). Agency in the context of collective action problems is not an individual-scale phenomenon: it is a property of relationships and groups. Solving collective action problems depends on fostering cooperation through empathy and shared meaning (Tarrow, 1994/2011). In isolation, many individuals centering their own personal definitions of *sustainability* to learn about sustainability does not develop shared meaning, empathy, or agency.

Recognizing the reality of intersubjectivity and complexity means trying different approaches to understanding the meaning of sustainability. A rationalistic strategy of individuals debating static, abstracted denotations is popular and well-tested, but even if it were the best single strategy, it would still leave unexplained variance. Clear denotation does not inevitably lead to understanding; for example, no matter how lengthy or highly specified a finalized legal contract is, it is normal for lawyers to have rational disagreements about its interpretation. The signifier is always indeterminate. A more effective strategy for understanding—or at least, understanding in different ways—would recognize both the limits of denotational understanding and include other ways of understanding. In Chapter 2, a semantics approach illustrated the importance of context in understanding sustainability. In Chapter 5, sustainability entrepreneurs outlined some of the emotional and social dimensions of understanding sustainability: entrepreneurs could be highly empathetic towards their conversational partners, understanding their emotions as well as their professional experience. We generally try to understand the intended meanings of our conversational partners interactively and effortfully, building and integrating awareness of self and partner. Successful communication depends on an ability to infer the conversation partner’s

beliefs and desires (Grice, 1969). *Pragmatic competence* is frequently characterized as the ability to understand speaker intention and meaning (Bosco, 2006). Pragmatic competence can be highly inferential, much of that inference operating on non-verbal, non-linguistic information as language users interact socially and have effects on each other (Ifantidou, 2014). Pragmatic competence is like mind reading ability (Ifantidou, 2014), not because denotation means nothing but because there is so much more to meaning. Because the inferential load of finding non-linguistically coded meaning can be so burdensome, understanding requires making an effort to understand our conversation partners. The same argument has been made in neuroscience: linguistic and theory of mind abilities recruit separate networks; successful communication requires some coordination of both (Paunov et al., 2019). Psychologists have also explored some of the mechanisms of non-linguistic coordination (Fusaroli et al., 2012; Louwerse et al., 2012; Richardson et al., 2007). A critical perspective that searches for deficiencies in linguistically coded information will always find them. I find this perspective quite frequently in scholarship. However, among the sustainability entrepreneurs I discussed here, I observed a strong motivation to search for the truth value in the perspectives of their partners—even in superficially oppositional settings—and a collaborative approach to grounding meaning in interactions between people trying to understand each other. A fundamental challenge of complex systems is emotional: how its human actors cope with uncertainty. I've come to appreciate the value of searching for shared meaning in both coping with and collectively resolving uncertainty.

The same communication critique can be applied to performance management. In a performance framework, indicators could be viewed as a communication strategy; they allow state or institutional actors to communicate without context or interpretive abilities (Porter, 1995; Scott, 1998). Development of performance frameworks is almost always geared towards improving the coded content, for example, making the indicators more accurate and precise, and elaborating indicators to cover more of organizational life. The pragmatic competence and theory of mind literatures show a weakness of this approach. Ultimately, performance management frameworks must grapple with how different minds can share ideas. The institutional work focus brings some attention to the micro-level emotionally mindful communication that performance management requires.

A rationalistic, isolated approach was evident in the literature on sustainability reporting in higher education. Sustainability reporting literature was disconnected and isolated. In my review, the majority of scholarly papers were written without referencing other relevant literatures, such as performance management, accounting, or sustainability reporting. STARS was also neglected in the literature. Despite having over 500 reporters, an order of magnitude more prevalent than any other sustainability reporting framework, and emerging as the industry standard, STARS was studied in only seven articles. The majority of scholars preferred to describe their own experiences using their own methods. As a result, the scholarship has contributed very little to the ongoing development of STARS (or any other sustainability performance management framework), to the field of professional practice, or to understanding STARS, in particular, its impact on the work of sustainability professionals or its role in enabling organizational change.

A major theme throughout the dissertation is how common heuristics for learning and navigating uncertainty are limited, even problematic. I have generally lumped those heuristics under the label *rationalism* but there are many dimensions and terms for the general phenomenon. One dimension is an overly narrow view of knowledge synonymous with the Western intellectual tradition. The narrow understanding of knowledge can be called ‘brainbound’ (*sensu* Clark, 2011), in which we generate knowledge by manipulating logical or verbal symbols inside our individual brains. This brainbound perspective I feel underlies the disproportionate focus on individual verbal definitions of sustainability and personal research methods on campus sustainability. Words and symbols become sites of political contest among educated people because we conflate word debates with more significant behavioural change.

Brainbound education leads to hopelessness. One conversational partner who had recently graduated from a sustainability program spoke about what they felt was missing from their education: “The courses that I’ve taken were very good at describing those [sustainability] problems, but where do we go from here? I would hope that at the end of some of these courses, I might come out with more than just a feeling of devastation... we never really seemed to get past the ‘wow, we’re really messed up’ part.” This deficiency was directly related in their mind to the program’s rationalistic approach: “everything is disconnected” and it had “a lot of emphasis on the individual.” They felt a broader scale and more social, integrated approach would not leave them with those feelings of devastation and would also be more effective education. The program had provided lots of rational intellectual information and analysis but left students as isolated individuals with no logic or mechanism of action to improve anything (except to provide good information and analysis to decision-makers, the ineffectiveness of which is immediately apparent to most professionals), no appreciation of collective responses to institutional problems, no agency, and no hope.

Another dimension of this rationalism is the assumption that knowledge leads to action: after we have analyzed and decomposed a problem to an intellectually satisfying solution, rational action magically and inevitably results. Knowledge is the foundation of individual and collective action. A knowledge to action logic is embedded in higher education and in Western society. We implicitly follow it when organizing our response to social problems. We create academic specializations to study named problems, specialized organizations to solve them, and educated specialists to staff the specialized organizations. The formation of academic specializations, professions, and organizations are all part of the rationalistic response to harness knowledge to solve problems. For example, to understand environmental problems, we create environmental studies programs to produce highly qualified environmental professionals. The professionals can then work in government departments of environment and consulting companies, negotiate with each other about the norms they would observe, and then create environmental professional certification bodies which can then lobby for exclusive jurisdiction over certain problems, as the Alberta Society of Professional Biologists has been doing in Alberta. These responses are perfectly coherent and rational according to the knowledge to action logic.

The knowledge to action logic has itself become a new field of scholarly specialization going under various names: *social engineering* in the 1970s (Nutley et al., 2000), *research utilization*

and *research dissemination* in the 1970s and 1980s (Knott & Wildavsky, 1980), and more recent compound forms of *knowledge*, including *brokering*, *management*, *translation*, *utilization*, *ecology*, and *mobilization*. Some of the classics in the field have pointed out the inherent challenges and intractability—for example, Weiss (1979) and Stone (1997)—and newer frameworks typically include a clear, intellectually satisfying procedure to resolve the named challenges. Knowledge to action frameworks are typically highly cited but seldom used, that is, scholars have cited the classics while making the point that moving from knowledge to action is important but have seldom directly used or applied those frameworks (Field et al., 2014); mobilizing knowledge is difficult, even within the field of knowledge mobilization! Mobilization requires a behaviour change component, but behaviour change has typically been absent in the knowledge to action scholarship (Davies et al., 2010). When behavioural change components have been explicitly included, they have focussed on individual capabilities and motivation, neglecting social context (Davis et al., 2015), which is consistent with the rational, individualistic approach. The knowledge to action logic does not fully describe the reality of collective action problems, nor does it contribute to developing the agency required for collective action problems.

These rationalistic responses are limited in the types of problems they can solve. The most serious collective challenges have remained undiminished with each improved iteration of the knowledge to action scholarship, with each new organization given jurisdiction over new problems, and with each new generation of educated professionals specialized in the new problem. These rationalistic responses, while undeniably achieving adequate levels of performance in ‘simple’ problems, have been least effective in more ‘complex’ types of problems. Scholars have coined multiple terms for this ‘simple’ and ‘complex’ typology of problems: *tame* and *wicked problems* (Rittel & Webber, 1973), *hard* and *soft systems* (Checkland, 2000), *high ground* and *swamp* (Schön, 1987), and *puzzles* and *messes* (Ackoff, 1974). Although their typologies are slightly different, they can all be partially understood as criticisms of traditional rationalistic approaches to re-solving complex problems. Complex problems are not only difficult to re-solve, academics have found them the most difficult to understand intellectually, as they have the widest gap between real and potential knowledge (Jeschke et al., 2019). I suspect that rationalistic approaches to understanding also have the widest gap to action: a brainbound understanding of a problem is not equivalent to doing anything about it. If the aim is to re-solve a problem, then the most productive questions are less about the specificities of a problem and more generally about what can enable change.

I believe that collaboration and relationships are particularly important in understanding and intervening in complex problems. Rittel (1972) touched on involving people affected by planning in the planning process. Roberts (2000) studied an attempted collaborative intervention in a wicked problem but did not explicitly address legitimation, agency, or arguably collaboration. Geoffrey Vickers (in Checkland, 2011) argued for a prosocial response to intersubjective problems. Relationships were central in his epistemology, which he called appreciative systems. He argued that life was about sustaining relationships and people’s actions are inherently relational. Some of us might want to be rugged individuals independent of everybody else, but our desires and philosophies do not change the fundamental reality of our

interconnectedness and the intersubjective reality of stable interconnections. Increasingly, our intersubjective realities isolate us and reshape us to become more individualistic. Anyone trying to change an intersubjective reality will be met with defensive arguments, such as the futility, perversity, or danger (Hirschman, 1991) of their efforts. The sustainability entrepreneurs in Chapter 5 skillfully illustrated the change possibilities of forming positive relationships. I would argue collaboration enables change in complex systems: the formation of positive relationships helps to overcome natural defensive emotions, enables individual and collective agency, and helps to find shared meaning.

One of the contextual factors I highlighted in this dissertation is bullshit. Bullshit is a concept that resonated deeply with me; it powerfully captures dominant thoughts and feelings I have of my experiences of organizational life. Related concepts in the organizational research literature include functional stupidity (Alvesson & Spicer, 2012), decoupling (Weick, 1976), spectacle (Flyverbom & Reinecke, 2017), and of course, ceremony (Meyer & Rowan, 1977). Bullshit, particularly as conceptualized by Graeber (2018), is also part of the antiwork literature (e.g., Frayne, 2015; Weeks, 2011), which has roots tracing back to Russell (1932) and Marxism (Hemmens, 2020). I do not adequately contextualize bullshit with its rich intellectual heritage because of my unfamiliarity with it and also because of my focus on its institutional dimensions. The institutional dimensions of bullshit highlight the benefits of conformity and the costs of initiating change, even in the context of a far from optimal status quo. Employees have so much untapped potential that they cannot develop because they do not have the agency to change their environment, which makes them miserable. I think institutional perspectives adequately explain how bullshit organizational practices persist and even proliferate. I feel however that there is another dimension that is typically not addressed: the emotional needs that bullshit practices *do* meet.

Individuals and organizations are deeply uncomfortable with uncertainty. When everybody adopts the same beliefs and practices, not only does their intersubjective truth value increase, but people feel better and more confident about those beliefs and practices. By structuring human interaction, institutions reduce uncertainty (North, 2017), regardless of their level of bullshit. A major source of uncertainty in organizations is that they are full of interacting humans who have social and emotional dimensions. Discomfort with this source of uncertainty is reflected in the 19th Century rise of the bureaucracy. In bureaucracies, everybody could just follow scripts laid out from above and be reassured they were doing their job, thereby building organizational confidence. However, there was still a void of uncertainty that needed to be filled, and the late 20th Century rise of the professions in organizational life reflects further efforts to reduce uncertainty. The professions provide confidence by establishing boundaries and externally legitimated routines; they add another layer of scripts to help minimize unscripted interactions that cause awkwardness and uncertainty. Performance management scripts add another layer of uncertainty reduction. Now individuals have lots of professional and bureaucratic scripts to follow and organizations have reduced uncertainty. However, the professions have not solved the problems over which they have exclusive jurisdiction and there is little evidence that modern organizations are increasingly innovative, efficient, or effective (there is more evidence of the opposite). And no matter how elaborate the scripts, indeterminate situations always arise. And

the same fundamental problem will still be there: uncertainty from human interaction. If organizations continue their behaviour, the result will simply be more and more scripts for rational actors to follow. An alternative is to recognize the inherent humanity of those awkward, unscripted situations (Kotsko, 2010). Unscripted situations provide an opportunity for organizational interactions based on ‘new’ prosocial scripts that recognize the extra-rational humanity of all parties. The prosocial aspect of these scripts helps people emotionally as they cope with the uncertainty of challenging the status quo.

Sustainability practices in organizations frequently have a denotational focus but they can also include a more social dimension. The organizational scripts for engaging with sustainability include developing a thoughtful definition for the organization. Thousands of organizational definitions of sustainability have now been developed. The processes for developing an organizational definition, although they might be led by a sustainability professional, frequently involve consultation and collaboration. These scripts recognize the social dimensions of meaning making and of sustainability. These social meaning making processes are perhaps related to the emergence of senses of *sustainability*—some of which emerged in the conversations—that reflect a processual and social perspective. I suspect that a big reason for the emphasis on human flourishing in the original definition of sustainability in Goldsmith et al. (1972), is because the authors thought it would resonate more with a non-environmental audience. I did not consistently query sustainability entrepreneurs about their motivations for adopting an appreciative lens to define sustainability, but I suspect the same logic is at play. Popular psychology tells us appreciative lenses are more successful at influencing others, at least in Western culture. Adopting an appreciative lens is a recognition that human interactions are not entirely rational, a recognition of others’ perspectives, and not just their ‘brains,’ but the emotional foundation of their reasoning, and the social processes through which meaning is negotiated. This is perhaps the beginning of a shift from rationally making meaning from denotation to a focus on making meaning from prosocial, procedurally just processes. Currently however, procedural justice norms appear to be less prevalent, less developed, and less central, both in the sustainability literature and among many sustainability entrepreneurs in their understanding of sustainability.

For sustainability entrepreneurs, sustainability generally connects to deep personal convictions, provides a foundational framework for finding meaning, and a central orientation for personal and professional challenges. At higher education institutions, they face the challenge of effecting massive organizational change with limited organizational resources. The sustainability entrepreneurs I spoke with deliberately and strategically chose STARS to advance their sustainability goals. Part of this is because STARS gave them various forms of legitimacy, a limiting resource for most sustainability entrepreneurs. With that legitimacy, they could choose to do the minimum: a box-ticking exercise. Many sustainability professionals choose this option. However, for sustainability entrepreneurs, the legitimacy provided by STARS provided an opportunity to perform institutional work: enter into unscripted situations, have difficult conversations, and exercise their social skills to elicit cooperation. A big part of this was the skill of sustainability entrepreneurs to ground STARS in the experiences and aspirations of non-sustainability staff. The skilled institutional work of sustainability entrepreneurs was directly related to the extent of the institutionalization of STARS and ongoing refinement of STARS.

STARS is an example of how lower status entrepreneurs can effect organizational change through institution creation. Not just any externally legitimated institution will do though. STARS was consistent with sustainability entrepreneurs' mental model of organizational change. STARS is extremely rational and expressed in a logic that would resonate with executives. It is also based on empirical data and best practice and expressed in a logic that resonates with professional staff. It also provided entrepreneurs with the flexibility to employ extra-rational, appreciative, and social capital building scripts.

I inferred this from contextualizing the individual experiences of sustainability entrepreneurs with the institutional work literature. My finer scale focus was inspired by arguments for focusing on the 'micro-level' (Westley, 2002), on practice (Lawrence & Suddaby, 2006), and on work (Barley & Kunda, 2001). The finer scale focus allowed me to examine the impact that sustainability reporting could have, without being limited by the fact that the report is rarely read or used once it is completed.

The institutional perspective developed in reaction to rationalistic perspectives. A key assumption is that institutions are not strictly rational: they are embedded in social and professional fields that cope with uncertainty by sensemaking in extrarational ways. In naturalistic perspectives (Berger & Luckmann, 1990; Carroll & Hannan, 1989; Hannan & Carroll, 1995), organizations are not formed by rational, purposeful planning but emerge over time through collective sensemaking. The institutional perspective helped me understand these two coexisting phenomena: the exaggerated pretence of rationality and pervasive organizational bullshit. They are natural features of evolution in institutionalizing environments. Rationalistic organizational change efforts that do not recognize these institutional features are not capturing important organizational dynamics, and therefore, their success is likely to be limited.

Organizations rely on reality testing that is simply not very good on its own terms; it has become another area of organizational mindlessness, disconnected from experience. Conventional accounting and performance management have become institutionalized and are the dominant frameworks used by the most positionally powerful within organizations and by powerful external funders. However, they face serious problems. Accounting fails even on its own terms of capturing value creation, productive relationships, decision utility (Williams & Ravenscroft, 2015) or guiding organizational development. However, some of the most serious criticisms have to do with terms external to accounting, that is, its constituents have evolved but accounting has not. Accounting has not seen any fundamental innovation since 1925 (Neely et al., 1995), which is problematic because the system and its control indicators need to coevolve (Courty & Marschke, 2004; Meyer, 2007), related broadly to Goodhart's Law or Campbell's Law. Many types of information are processed throughout the organization by all employees in all units using many sub-cultural heuristics, but executives overwhelmingly operate (for example, accept information inputs and make decisions) in accounting and performance management terms. The practice of accounting has become defined by professional accountancy: because one group dominates, it is not representative of its constituents (Grandvoinet et al., 2015). Lack of representation almost invariably leads to underserved areas. Sustainability is one such area.

Accounting improves when constituents provide their own accounts (Bebbington et al., 2017) and sustainability reporting is one such attempt by sustainability constituents.

I wrote much of this dissertation during the COVID-19 pandemic. Although excess deaths likely exceed 20 million as I write this (The Economist, 2022), and friends and family are suffering because hospitals have had to indefinitely postpone their care, public discourse is dominated by other issues. One of the most dramatic and consuming phenomena of the pandemic was the politicization of vaccines in North America and the radicalization of its opponents. When the pandemic started, the development of effective vaccines seemed like a pipe dream. However, multiple amazingly effective vaccines were developed in months, an incredible and unprecedented achievement in the natural sciences. And yet, the majority of the 5.15 million people who have died from COVID-19 died after the vaccines were developed (Our World in Data, 2021). And the intersubjective, social dimensions of COVID-19 are even worse after the vaccines have been developed: more people are more emotionally dysregulated, more misinformed, and more radicalized. Public discourse, even after two years, is almost completely devoid of biological information and completely disconnected from the amazing strides made in mRNA technology, virology, aerosol engineering, etc. Public discourse occurs so high up the inference ladder—focussing on rights and freedoms and the economy—that biological evidence is irrelevant. Empirical calibration of public discourse is impossible because there are so few empirical data, and we would not know how to make sense of them even if there were. Developing vaccines and changing attitudes and behaviours are clearly two different types of problems. Developing a vaccine for COVID-19 is an analytical type of problem that can frequently be satisfactorily solved with rationalistic approaches. Behaviour changes are typically intersubjective, collective action problems. In either case, our collective response to COVID-19 does not fill me with hope for other social problems with less immediate and visible outcomes. As many environmentalists have lamented, if literal piles of dead bodies outside of hospital emergencies cannot convince people of the severity of COVID-19, then the impending (or current) climate disaster has no hope of changing minds. The refrain that adults can take responsibility for their own actions and that regulations infringe upon individual liberties has only increased in volume and intensity. No matter how convincingly Peltzman (1975) is rebutted (e.g., Graham & Garber, 1984; Jochsch, 1976; Jones & Bayer, 2007; Robertson, 1977), the limitations of individual approaches to navigating risk (e.g., Haider et al., 2012; Hedlund, 2000; Ti & Kerr, 2014) and the fallibility and nonrationality of human judgement (Kahneman et al., 2022; Kahneman & Tversky, 1979; Tversky & Kahneman, 1974) are demonstrated, we insist that people are rational and everybody should become their own individual uncertainty calculator. Unfortunately, we do not give them the tools or decision environment to do it well. It is also unfortunately an old political cleavage in North American politics, and many collective responses seem to engender almost reflexive opposition. Saying people should take responsibility for their own actions in a decision environment that does not recognize their full humanity is a recipe for failure. We have tried individualistic, rationalistic approaches to collective action problems for decades and our rationalistic problem-solving heuristics are presumably at the point of diminishing returns. I feel like they are at their limits and cannot improve much more, despite not having been overly successful. Perhaps it is time to re-evaluate them and try additional approaches.

6.2 Research limitations

During my defence, I was asked about my epistemology and ontology. I knew that these were traditional subjects of PhD defences but for some reason (I would hypothesize some link with my father-in-law and I rushing to complete home renovations before our baby's due date and subsequent newborn care), I had not prepared for them at all. I think my emotional reaction to this topic is similar to how I felt upon being compelled to personally define sustainability for a class assignment; even the phrase "adopting an epistemological position" feels to me like "personally defining sustainability." Also similarly, my natural response is to want to reflect in writing, for about the length of a manuscript, to better understand my emotional reaction, while searching for concepts that emotionally resonated with me, which now feels impractical and self-indulgent. I would approach the question of my epistemology and ontology by 1) searching for labels that resonate with my experience of this PhD, 2) searching for labels that resonate more generally with my thoughts about thinking, and 3) reflecting on my dissertation through those labels. I discuss these points below in what is essentially an evaluation of the dissertation on its own terms. Ideally—and according to a logic that I have explicitly praised in the dissertation—the evaluation would be conducted using external terms. However, this is impractical for single works, particularly largely solitary PhDs.

The natural script for me to follow is to apply any one of many perfectly fine pre-existing labels to my work and everybody would be satisfied except me. For example, social constructionism seems to be a suitable label, and by affixing that label, I am also packaging a bunch of related ideas in a way that saves me from thinking too hard about the subject. I would probably feel more resonance with more popular epistemological stances if I knew what the consequences were. By adopting a particular epistemology, do I think about or perceive the world in different ways? What is the mechanism that links writing some words about my epistemology with the dominant cognitive functions I used during this dissertation? Coming up with an answer might seem an unreasonable goal, but I'm not sure it's been overly popular to engage with the question at all. Integrating the psychological literature would likely satisfy me to some degree. One strand of thought that I would be particularly interested in integrating is unsymbolized thinking (Heavey & Hurlburt, 2008) and the dissociation between language and thought (Fedorenko & Varley, 2016).

One would naturally assume that this dissertation would reflect my thoughts on these issues: putting my thoughts into practice, or words into action, as it were. I'm not sure that this is the case. This dissertation is largely a product of individual verbal reflection, some limitations of which I wrote about in different ways in different chapters. Verbal reflection predominated the fields of scholarship that I most relied upon; this is a bigger factor in its predominance in this dissertation than my belief that it's the surest path to knowledge. I feel that by relying so heavily on verbal reasoning, I left most of my brain unengaged, and the PhD is less rich than it would have been if I had engaged with it in more diverse ways. The "thinness" is largely why I found the PhD so emotionally challenging. However, as I learned, personal reflection is just plain difficult for me, far more so than synthesizing other's people thoughts. How could I not know what I thought about something? I learned that I don't know what I think most of the time. Not just in the narrower 'mindfulness' sense but more loosely: I don't know what I think about most

things. Figuring out my thoughts out and writing from a personal perspective is quite effortful. Integrating self and other perspectives is probably a common challenge for PhD students. My voice is captured in parts of this dissertation, and I appreciate that outlet, but I'm not sure if it has much epistemic value. Unfortunately, I don't think all that reflective effort offered many buffers against the systematic thinking biases we all have either. And almost by definition, by allowing emotional resonance to guide my judgement of diverse scholarly perspectives, I was less receptive to non-conforming ideas.

Like most people, I frequently think about thinking with metaphors (while recognizing that they bundle uncertainty for convenience, rather than rigorous knowledge-seeking). Throughout the past two thousand years, we have just grabbed whatever metaphor was handiest to think about thinking; now, for example, because computers are everywhere, thinking means we perform computation on symbols (Zarkadakis, 2016). It's not a metaphor that resonates with me but of course it has influenced my thinking. One metaphor that resonates much more strongly and that I thought about frequently during this PhD is the inferential web of Quine (1951/2011). The messiness of disconfirmation and the perceptual power of inferential webs are ideas as fresh, insightful, and relevant as anything I've come across during this PhD. I am struck by its explanatory power in many quotidian experiences, such as interacting with other human beings! A somewhat related metaphor is the ladder of inference (Senge, 1990), which I use with friends or family because it's easier to visualize moving across one dimension; web topology is a little cumbersome to communicate. I would characterize this PhD as spinning an inferential web with verbal reasoning. Throughout this dissertation, I also used the logic of experiencing, sensemaking, and calibration because it resonated with me. This dissertation is tilted towards sensemaking and away from experiencing and calibration. By the norms of the literatures I primarily cited, it could stand alone and claim to have some knowledge value. I think it would be stronger in conjunction with more experiencing and calibration; in the norms of some sciences, this would involve prediction and experimentation, although in previous lives, I was immersed in—and therefore have a bias towards—quantitative exploration. This dissertation opened my eyes to experiencing and calibration through conversation. I quite enjoyed and appreciated the conversations, although the nature of organizational life means that research participants have limited time to talk with students and researchers, and unless the researcher has long-term relationships with the participants, the iteration of learning is quite limited.

This dissertation was largely based on the institutional literature. I outlined a number of reasons why I found institutional perspectives appealing, most importantly, that they are standard frames in organizational research to explain persistence. I realized preparing for my defence that I did not find the new institutional account of persistence completely satisfying. The institutional literature had introduced concepts—for example, legitimacy and isomorphism—that operated at similar scales as the institutional concept that they were supposed to explain. In the new institutional literature, legitimacy and institutionalism frequently use the same indicator: a simple count of the phenomenon under investigation. How much explaining can an explanatory variable do if it's observationally indistinguishable from the dependent variable? Legitimacy appeared to be doing more grammatical work than explanatory work in some of the articles I was reading. In any case, I did not come across any mechanisms of system persistence described within an

explicit cross-scale research framework in the institutional literature and it is the only literature I used to explain the resistance faced by institutional entrepreneurs.

I did not draw on the “sustainability measurement” literature. The sustainability measurement literature appears to be quite an integrative literature, likely drawing on literatures that I did not touch. I might have come across different, better ideas and tools earlier if I had read about sustainability measurement.

6.3 Future Research

6.3.1 Research, teaching, and professor engagement

STARS’ biggest deficiency is almost certainly evaluating research and education, which are core, distinctive functions of higher education institutions. I thread some themes and potential lines of inquiry below. Ideally, the development of a framework to evaluate those core functions would involve professors. Unfortunately, the majority of professors have not engaged with sustainability reporting (or with sustainability more generally). One professional conversation partner described the challenge:

It’s a common struggle across all of higher education: how do you excite faculty to get engaged in this work? Faculty in and of themselves they’re naturally competitive, they’re naturally wanting to pursue their own interests, they don’t necessarily like others telling them what to do.

Professors are traditionally the highest class at universities, who perform the most revered work of the academy; lower class professionals therefore have a difficult job providing critical feedback. As another professional conversation partner said, “I don’t think it would ever be appropriate for someone in my role to bring forward a proposal that really gets at some core values around academic life. I think that the only people who can do that are faculty.” They continued:

It’s tough. I would really like to have a much stronger sustainability representation in several areas of our university teaching. I really, really would. But I’m also profoundly uncomfortable with doing that in a way that requires departments to do things they don’t want to do—in a way that I’m a lot less uncomfortable creating new rules for purchasing.

They believed that professors were untainted by the logic of control used by professionals:

I’m saying, “How are we going to measure these things, and what’s the plan for reporting, and how are we going to decide who’s supposed to do what, and we need our plan to say who’s bottom lining this?” And everybody was just like, “What are you talking about?” I just kept leaving these meetings and being like, “I don’t understand, we’re writing a plan that doesn’t have any measurement!” It took me a while to just realize, I’m in a different universe.

Professors might not be explicitly conscious of how intimately familiar they are with the logic of control and performance management. Professors have industriously observed managerial norms, particularly ‘meritocratic’ evaluation criteria, to advance their individual careers

(Alvesson & Spicer, 2016). One mid-career professor conversation partner described their early career:

It was just the treadmill. A little hamster in the treadmill. And you're like, "Oh my god! Ok, grant!" [sound of despair] Teaching! [sound of despair] It was very stress-making. Pre-tenure, it's just all about get out enough papers, do sufficiently good teaching. We're all on the treadmill to get tenure.

Control tools can isolate professors, which can be detrimental to the quality of their work, as a late career professor described their early career:

Everybody's isolated, struggling with their own career... So they have to work really, really hard at their own CV and ... they don't have time for collaborative efforts or even public kinds of efforts...in order to do well at my job, I actually have to have some connection to other people.

I find this interpersonal connection aspect to scholarship quite interesting. Scholars can learn in different ways when their network of validation includes relationships extending beyond their purely academic networks. Speaking of a regional network that included scholars, students, community, and government representatives, the professor continued, "There's a redefinition of outcomes in a more pragmatic way I think than happens in strict disciplinary contexts." This sort of redefinition might appeal to some professors but might also cause some discomfort.

Admission into the class of professors and upward mobility within that class typically requires a level of performance unlikely to be achieved with only a half-hearted belief in the intrinsic value of the strictly defined performance indicators—for example, the number of articles published, or courses taught—that got them to where they are in the first place. That is, by succeeding in the existing control system, they are now invested in it. However, some professors, while believing in the value of the performance indicators by which they are judged, might be open to reframing those indicators and perhaps slightly grounding them in non-academic validation networks. Challenging norms requires legitimacy in the institutional perspective, which might be provided through external constituents. Another professor, speaking of projects involving professors, students, and community members, perceived that "we each legitimize the other." Each group has different sets of constituents and together, they could help to legitimize their work to their constituents. Professors could not only have their work validated in different ways, but those different ways of validation could help to legitimize their work on traditional indicators.

6.3.2 More perspectives on persistence

As mentioned above, I don't find the institutional account of persistence entirely satisfactory. Integration of other literatures would likely provide some insight and avenues for further exploration. Various psychological models of responses to uncertainty (e.g., Heine et al., 2006; Hirsh et al., 2012; Hogg, 2007; van den Bos, 2009) provide potential mechanisms for persistence grounded in individual experience. System justification (Jost & Banaji, 1994; Jost et al., 2004) is a related idea that frequently addresses the cross-scale, affective aspects of an individual engaging with social constructs; it has diffused beyond psychology and as a result, its literature is relatively richer. The systems theory literature has quantified the frequency-dependent selection

(where a trait's adoption depends on its frequency, independent of the trait's value) of many social phenomena and the potential generation of diversity or conformity (Newberry & Plotkin). These literatures all examine related phenomena using slightly different tools, perspectives, and scales, which when integrated, could enrich the understanding of persistence in organizational settings.

6.3.3 *'Negative' emotions*

Emotions that have traditionally had 'negative' evaluations have been the subject of recent popular books (e.g., Cain, 2022; Fosslien & Duffy, 2022; Pink, 2022; Wray, 2022), adding to—among others—Brené Brown's scholarly and Tara Brach's more meditative explorations. One idea common to all these books is that 'negative' emotions (after careful scrutiny of what that term might mean) have value; they contain valuable information if we can momentarily pause and observe our interactions with them. Yet, in North American society, 'negative' emotions have no role in public or private life; if we experience them, we are taught to quickly replace 'negative' emotions with 'positive' ones. We must suffer alone, in silence. Then, when we are cured of our personal weakness, we can interact with other people. In Kikongo, when one is asked, "How are you?" or "How is your strength?" the response, "Only a little bit" is sufficiently normal that the questioner is not obligated to put on a big show of sympathy. I cannot imagine this interaction occurring among North American native English speakers. Pretending that 'negative' emotions do not exist prevents us from learning about ourselves and how to better navigate our lives, and more generally seems like an unrealistic and unproductive framework to cope with the full spectrum of human experiences.

The relationship between affect and sensemaking at individual and organizational scales is interesting to me and could provide an alternative integrative framework for themes I observed during this PhD. The role of negative emotions in particular seems underexplored. Negative emotions are pervasive in organizational life and in sustainability work, but they are generally not openly discussed. The emotional toll of sustainability work was universally voiced by female conversational partners. Male conversation partners sent a more muted signal and two did not express any negativity; since all the higher education institutions had experienced significant bumps along their sustainability journeys, I doubt that this is because they did not experience any frustration and would speculate that they were more reluctant to voice it. Our taboo over sharing 'negative' parts of our stories precludes both truth-telling and collective sensemaking about their meaning. One sustainability entrepreneur advocated that "we actually share the squiggle line story because that is the truth." At the individual scale, our reactions to negative emotions could range from defensiveness to curiosity. Reflecting on what might be the most valuable lesson they could teach their students about sustainability, one professor said, "What I've learned in my life is that if I have a really strong negative reaction to something—it's happened with lots of different things—there's something in it for me and if I explore it, I actually turn out to love it some way... if I could teach people that to explore when they have resistance... you find really deeper places in yourself" (interestingly, the responses of other professors I asked about what they would most want to teach about sustainability were also about something with a strong affective dimension, not factual or theoretical matters). At the organizational scale, the negative emotions that employees feel are signals; they provide information about work life. For example,

the hopelessness and frustration that so many workers experience might be perfectly ‘normal’ human responses to bullshit in their organizational environments.

‘Negative’ emotions could enhance theorizing about and managing organizational change. Most organizational change efforts fail; most fail because of employee or managerial resistance (Keller & Schaninger, 2019). Although change management approaches vary widely, they are most frequently led by highly educated people who espouse and prioritize rationalistic logic. The balance of the field is tilted away from valuing, or sometimes even recognizing, the full emotional and social dimensions of employees. The emergence and popularity of appreciative approaches in the fields of organizational change and development is, I believe, largely beneficial, particularly because affect plays a central role. However, a strictly appreciative lens does not help us understand or manage the negative emotions that people inevitably experience. What is the link between the resistance by employees and managers to procedural justice, that is, their voice and the representativeness of the change leaders? From a procedural justice perspective, sustainability reporting can be conceived as an attempt to better serve constituencies underrepresented in traditional accounting. The institutional work performed by sustainability entrepreneurs can be conceived as overcoming “resistance” by valuing the social and emotional dimensions of their colleagues, which is a fuller, extra-rational model of organizational change. The field of organizational change might benefit from similar efforts.

If I had to do this PhD over again (this would never happen and is simply absurd counterfactual thinking), I would center ‘negative’ emotions. I felt that frustration was a major theme after finishing the conversations with sustainability entrepreneurs, yet I did not focus on them in my subsequent writing. I’m not sure why I didn’t, but I would guess that the taboo on negative emotions and the power of the appreciative lens played a role. As a consequence, I neglected an important part of the experiences of sustainability entrepreneurs and employees in general. What is it about people’s work lives that finding meaning is such a struggle and that makes them so disengaged? We have to centre aversive emotions in our investigation to find out. Aversive reactions are potentially intimately tied to two strands that run all through this PhD. Our aversive reactions to disconfirming evidence and uncertainty might be interlinked with the increased prevalence of negative emotions; the increased rationalization of the status quo, resistance to change, and general frustration of calibration; and the complete absence of social and organizational scripts to cope with aversive reactions. And from a procedural justice perspective, it’s important to recognize and understand the signal ‘negative’ emotions are sending, if only we would pay attention to them.

6.4 References

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Appendices

Appendix A. Articles included in the literature review

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Appendix B. Conversation guide for sustainability professionals (version 2016-07-14)

We can orient these questions retrospectively (looking back at your experiences) or prospectively (thinking about possibilities), at any time scale from one event to your career engaging with sustainability. We can start by discussing any of the numbered questions from each research theme. Lettered questions are follow-up options. These questions are merely meant to help structure the most mutually engaging conversation possible.

Background)

1. Does the organizational definition of sustainability agree with yours? Are there any differences? What is the importance of an organizational definition?
2. What is a sustainability assessment?
3.
 1. Who are some of the key users and authors of sustainability assessments? Or
 2. What is your social network when sustainability reporting? Could you draw it?
 - a. Are there potential users who are not reached by sustainability reporting?

Research theme 1) Reflecting on different perspectives and values

1. What is your ideal campus? What do you envision for your university?
 - a. What would you love to see the university do to realize your ideal?
 - b. What do you expect to see?
 - c. What is the role of sustainability reporting in transitioning to this ideal? Ideally? Realistically?
2. What is the sustainability initiative that you have most wanted the university to implement?
 - a. How did you work towards implementation?
 - b. What was the role of sustainability reporting in implementation?
3. For what purposes does the university conduct sustainability assessments?
4. Has sustainability reporting helped to identify or prioritize sustainability initiatives?
 - a. What role did the sustainability report play in engaging with those priorities?
 - b. Have the values of specific reporting criteria—for example, particularly high or low values—led to identifying priorities?
5. Has there been an area of sustainability that you felt the university was neglecting or could have done better on? How so?

- a. Did sustainability reporting help in identifying or engaging with that area of neglect?
6. What role has sustainability reporting played in decision making in your work unit about sustainability initiatives?
- a. Has sustainability reporting changed how policies are developed, for example, who is involved or what sorts of information are considered?
 - b. Has sustainability reporting led to changes in the resources committed to sustainability or how they are allocated?
 - c. What has been the role of the sustainability reporting process in building a shared understanding of for example, sustainability goals and the activities and resources that are necessary to reach them?

Research theme 2) Reflecting on activities and impacts

- 7. How do you use the sustainability report?
- 8. Has sustainability reporting changed your understanding of sustainability? If so, how?
- 9. Has sustainability reporting changed any aspect of your daily work? If so, how?
 - a. Has sustainability reporting made it easier for you to think about how you could make your daily work more sustainable, or make changes to your work environment?
- 10. Has sustainability reporting changed your working relationships, for example, who you relate with or how you relate to them? If so, how?
 - a. Has sustainability reporting changed how you communicate with other professional groups or networks?
 - b. Has there been any change in cooperation levels or knowledge sharing on sustainability initiatives with colleagues or across work units?
- 11. If someone had a good idea about improving the sustainability of their work environment or of the campus generally, how clear an implementation path is there?
 - a. Has sustainability reporting changed this pathway, for example, in communicating, justifying, or thinking about the good idea? Do you have an example of this?

12. Has sustainability reporting over the years helped you develop skills or capacity that facilitate how the university learns about sustainability or that align with your personal development objectives? How?
 - a. Has it changed how you interpret and use empirical sustainability information?
 - b. How do you use your creativity while using the sustainability report?
13. Which evaluation criteria have you found most relevant to your work or work environment? Why?

Research theme 3) Reflecting on assessment

14. Has the university's sustainability performance changed over time?
 - a. How? In what ways?
 - b. What are some potential factors causing this?
 - c. What is the role of sustainability reporting in your assessment?
 - d. What is the role of sustainability reporting in this performance change?
 - e. Would you do anything differently? What lessons have you learned about facilitating sustainability transitions at the university?
15. What have been some of the main outcomes of assessing sustainability, positive or negative?
16. Thinking about a sustainability initiative in which you were involved, what was your theory of change? A theory of change means how what you want to achieve, what you do, and what actually happens connect to each other.
 - a. What were you trying to achieve? What was supposed to happen?
 - b. Describe the initiative. What activities, target groups, and types of interaction were involved?
 - c. What actually happened? What outcomes did you observe?
 - d. Did you refine your theory of change? Did you observe your proposed causal links between sustainability initiatives, outcomes, and communicating purpose?
 - e. What was the role of sustainability reporting in testing and refining your theory of change?
 - f. Would you change anything about the sustainability reporting process to make it more useful?

Closing

17. Do you have anything to add or clarify?