

Exploring Holacracy's Influence on Social Sustainability Through the Lens of Adaptive Capacity

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Abstract: The organizational structure of Holacracy has been gaining popularity in recent years, but a lack of academic research on Holacracy called for a systematic approach to assessing its merits and shortcomings. The need Holacracy fills, is that of organizations dealing with a complex world and rapidly evolving technology. While Holacracy is not tailored to address sustainability issues, there are many components that made it a candidate for the researchers to examine it through a social sustainability lens.

This study examines the effect of specific components of Holacracy with elements of adaptive capacity – a theory from which the research definition of social sustainability was built. With the goal of determining the effect of Holacracy on social sustainability, a questionnaire directed at employees and practitioners of holacratic organizations was utilized.

The findings implied that Holacracy does positively influence the experience of the elements of adaptive capacity; with the relationship to the adaptive capacity element of self-organization being a standout. The importance of trust is also identified. The link to the Framework for Strategic Sustainable Development can be elucidated through adaptive capacity's influence to the social sustainability principles. Because of the importance of social sustainability and social capital to organizational performance and longevity, this research is of value to any business using, or considering using Holacracy.

Keywords: Holacracy, social sustainability, adaptive capacity, organizational structure, FSSD

Statement of Contribution

After a two-day group formation process, the Holacrateam was born! Coming together through a passion for alternative organizational paradigms and innovative ideas, they were soon digging deep into the new world of Holacracy. As a relatively new concept for all the team, this initial exploration was both an intriguing and challenging one. As a new model, there was a very limited supply of appropriate literature for them to form this primary knowledge, so they had to find alternative ways of understanding. Luckily, one member of Holacrateam had a strong contact with a certified Holacracy coach who just happened to also be an MSLS alumni. This valuable contact proved to be vital in those first steps, providing the team with not only an overview of the field in practice, but also key advice in how to shape the research. This highly motivated the team, as from the output, they were able to see the potential benefits of their research, not only in regards to the academic field, but tangible benefits for the people working with Holacracy.

It was clear from the start, that Holacrateam had a shared vision. Not only in working styles, process design and the topic interest, but also in how to enjoy the time they spent together. Each step of the process was both collaborative and innovative. Work locations were regularly changed, to bolster creativity and fresh perspectives. Many a good coffee and dish were shared, all aiding to form a strong team and a well scoped process.

Throughout the process it was clear that Holacrateam's skill set were both diverse and complementary. Each phase invited different members to step up to contribute in unique ways, enabling the flow of work to continue. Below is a description of how Holacrateam described each other:

“Lewis has been a real rock throughout the whole process. He has contributed to the success of the thesis project in many ways. He is committed to the process and always brings energy and a positive attitude to our group work. He is passionate about the subject matter and diligently researches the topic, often bringing new ideas and important relevant concepts to the table, which the other group members might have overlooked. He listens well to others and provides honest and constructive feedback when discussing how to move forward with certain sections of the project. He's a hard working team member who ensures the written document is academically rigorous and pays meticulous attention to the details. He also has a real strength when it comes to technology and formatting, which has been critical throughout the whole process, especially in designing the questionnaire. Not only does Lewis strongly contribute by generating content for the document, he is a very easy person to be around and work with for long periods of time. His relaxed and positive demeanor brings a calming presence to the group when things get stressful or overwhelming. Overall, he is a great teammate who also gives some of the best hugs around!”

“Isaiah is an incredibly hard and committed worker with a real attention to detail. He has brought a lot of focus and intention to the project and has a real interest in the topic. Isaiah has a very clear vision and has a critical eye. Running ideas past him gives them more strength because of this. He is both a confident writer and speaker, and was willing to take on some of the larger, more challenging jobs like coding the quantitative data and the first draft of methods. He has been a real driving force during the process and his flexibility and willingness to adapt, to try to meet the group's needs, has been impressive and highly appreciated. He is very reliable and is always honest about what he is able to deliver. Isaiah has also contributed a lot to the

academic aspect of the project. His invaluable connection with the Holacracy coach and MSLS alumni Matt Mayer, was essential for the development of the research. His professionalism when talking with external agents is second to none. He always gives 100% and has committed to eight hour days throughout the whole process. This commitment has driven the project forward from the start, resulting in an enjoyable, relatively stress free ending to the course.”

“**Sarah** contributed to the success of the thesis project by providing focused big picture thinking to the process, always ensuring we were moving forward with clarity and in the the right direction. She is very good at scoping the work and reminding the group which ideas to pursue and which to leave behind. She is also a very engaged in the subject matter and passionate about the learning process. She brings great energy to the group and facilitates diverse work experiences so that we don’t get burnt out working in the same space or in the same style every day. Sarah has also brought a lot of her organizational and 3rd sector development experience to the process. Her editing skills as an English Literature graduate are invaluable to the writing process. This provides a deeper layer of knowledge when it comes to the form and structure of the writing. She is accommodating and supportive of other’s ideas and knows how to encourage others to feel confident in moving forward with new tasks. Sarah’s open and honest communication has been an asset for the team, enabling us to be honest about our abilities and limitations without judgment, and seeking the support we need from each other to continue moving forward as a whole. Sarah is a positive person to be around and makes each day working together a fun and light experience.”



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Sarah Forrester-Wilson



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Executive Summary

Introduction

The world is increasingly different from one day to the next, with levels of connectivity, complexity, uncertainty and change on a steady incline in contemporary society. Human interactions with the environment and the associated take-make-waste (Willard 2012) model of production and consumption highlight some key drivers of a social system that could fail to sustain itself through time. Unsustainability is often dominantly associated with the ecological impacts on the earth (Cuthill 2010; Dillard et al 2009) whereas social sustainability, has up until recently, not been equally explored (Boström 2012; Vifell and Soneryd 2013). Traditionally, as discussed in the literature, terms such as social capital and social cohesion have distinctly similar characteristics to what is now emerging as social sustainability. A study looking at the relationship between social capital and responses to climate change related issues, found that societies with higher levels of social capital, showed increased resilience when faced with environmental catastrophe (Adger 2003). Sustainability encompasses social and ecological domains, and because of their influence and interdependency on one another, they need to be addressed simultaneously.

The eroding global social system can be attributed to how societies function as a consequence of their design (World Bank 2012). A way to understand such design is to look at organizations, which are important subsystems within the unsustainable global socio-ecological system. Organizations play a major role in sustainable development, because of their economic power, influence on global governance and crucial impact on their own workforce (Shrivastava 1995). Moreover, many modern organizations contribute on a massive scale to depleting natural resources and ecosystem services, which are having a detrimental toll on society and the environment (Senge et al. 2008). Fortunately, it is possible that the way in which humans organize can also be part of the process of reconciliation with the natural world and to begin helping heal some of the damage that has been caused (Shrivastava 2014). For sustainable development to take place in an effective way, the dominant (growth imperative) worldview held by many managers and leaders must transition to a more productive, fulfilling and meaningful model (Shrivastava 2014). As Stevenson (2012, 86) suggests, organizational leaders too often fail to use systemic and complexity thinking, and this causes them to misunderstand the “landscape by using distorted or inappropriate maps that lead them to repeat the errors that have often created the complex issues they face.”

There have, however, been efforts to avoid these errors when planning in complex systems. For instance, the Framework for Strategic Sustainable Development (FSSD) was developed as a strategic planning methodology designed to handle complex issues in a systematic and coordinated way (Holmberg and Robèrt 2000). The theory of the FSSD postulates that the future cannot be foreseen in a complex system, but its principles can. These principles can be thought of as boundary conditions for redesign, in that for a plan to be successful, it must at least comply with the principles. The sustainability principles (SPs) were created through the development of the FSSD, an iterative process that over the last twenty-five years has distilled the elements of what constitutes basic principles for human survival on earth. The principles are scientifically agreed upon, non-overlapping and general enough to be used for strategic planning in organizations across a variety of sectors, and are necessary and sufficient to achieve sustainability. There are three ecological and five social principles, which respond to the basic mechanisms that result in the destruction of the socio-ecological system.

For the purposes of this research, the social sustainability principles (SSPs) were used. This was because the focus of the study was on organizations and their impact on the people within them. These principles have been defined as, “In a socially sustainable society, people are not subject to structural obstacles to: “health (SSP 1), influence (SSP 2), competence (SSP 3), impartiality (SSP 4) and meaning making (SSP 5)” (Adapted from Missimer et al. 2016a). The social sustainability principles were built by first defining the essential elements that make up a healthy and resilient social system. The ability to manage resilience can be referred to as adaptive capacity. Robert et al. defined adaptive capacity as, “the capacity to change and adjust to the sometime quickly-changing environment and is the essence of what allows them (socio-ecological systems) to be sustainable over the long run” (2015, 109). The key elements that were identified as essential, in achieving what is known as adaptive capacity or AC in short, were diversity, learning, self-organization, common meaning and trust. As social systems that have a large impact on their own workforce, organizations have a role in creating these adaptive conditions. With the design of the organization itself emerging as a new strategic variable (Daft and Lewin 1993), the authors are interested in studying how the characteristics of organizational structures contribute to social sustainability.

An early example of organizational structure is hierarchy, which is still dominant in today’s society (Horling 2005). There is literature now suggesting, that in facing severe societal challenges, such as unsustainability, the hierarchal organizational paradigm is insufficient (Adams et al. 2011). Self -management, innovation and diversity are just a few of the elements that are seen to be limited by the hierarchical model, and are all essential when working towards sustainability. Through the limitations identified, a number of examples of alternative organizational structures have emerged. The researchers have chosen to focus on the relatively new model of Holacracy, as it takes elements from several other alternative structures and provides a representation of the adaptive and decentralized nature woven throughout them all. The elements of AC, can be understood at both a systems and an individual level, which was most appropriate for the research in regards to the intended audience, the practitioners of Holacracy.

This research aimed to explore how the structure of organizations contributes to social sustainability. With Holacracy as the structure in focus, the research question explored in this study was:

How does the organizational structure of Holacracy contribute to social sustainability?

Methods

The methodological approach chosen for this study can be described as an “interactive” model, which is based on Maxwell’s (2012) Qualitative Research Design. This interactive approach frames the nature of the design components of *goals, conceptual framework, research questions, methods and validity* as different parts of an interconnected whole which each simultaneously influence all of the others. The research was designed to occur in five phases, each addressing a specified step towards answering the overarching research question.

Phase 1. Exploratory Interviews and Document Analysis. The goal of this phase was to understand the details of two different concepts so the researchers could compare them. These concepts were characteristics of the organizational model of Holacracy, and Strategic Sustainable Development, particularly in relation to social sustainability. This work allowed

the researchers to build a shared understanding of the sustainability problem being addressed (Lang et al. 2012) and learn how to work both effectively and collaboratively as a team.

Phase 2. Conceptual Framework Development. The researchers concluded on a conceptual framework formed of the following aspects. To communicate social-sustainability, the five *elements of Adaptive Capacity* were used. This included trust, learning, self-organization, diversity and common meaning. To communicate the core parts of Holacracy, four *components of Holacracy* were formed, which included Evolving Governance, Distributed Leadership, Working with a Purpose and Decision Making Authority. Together, these set the foundation on which the research was based on.

Phase 3. Research Instrument Development. The third phase of the research consisted of developing and issuing a questionnaire to be taken by practitioners and employees working for Holacratic organizations. The surveys assessed the impact of specific elements of Holacracy on social sustainability. The final research instrument took the form of a quantitative questionnaire, with five open ended questions also used to provide examples.

Phase 4. Data Collection. A “mixed methods” approach of data collection was adopted, because the combination of qualitative and quantitative approaches was the most effective way to answer the research question. After all of the questionnaire results were received, a further round of research was completed, in the form of five semi-structured interviews. These were done to triangulate the initial data and address validity concerns. The interviews were therefore focused on employees who volunteered to participate.

Phase 5. Coding, Analyzing and Interpreting Data. For the quantitative data, the type of questions asked were based on degrees of agreement or disagreement (the Likert Scale) on a scale from 1-5. The phrasing of the questions varied slightly to match the context of the questions. Points were allocated on the following scale relative to closed-ended responses.

Point Allocation of Closed-Ended Responses

1	Significantly decrease	Very negative experience
2	Slight decrease	Somewhat negative experience
3	No effect	No effect
4	Slight increase	Somewhat positive experience
5	Significantly increase	Very positive experience

For this data set, a Mann Whitney-U test was used to determine the statistical significance of the difference in responses between the two sample groups. The open-ended responses and interviews were coded into a matrix comparing Holacratic components to the five elements of Adaptive Capacity.

The sample consisted of 122 respondents, thirty-one of which were certified practitioners, and eighty-one who were employees working in an organization using Holacracy.

Results

The mixed methods approach used, led to three different types of results:

1. Quantitative Ordinal Data. Twenty closed-ended questions—generating answers that formed the majority of results. Each question was completed by at least seventy-two total respondents including practitioners and employees.
2. Qualitative open-ended. Five questions open-ended questions—used to provide more in depth examples to support quantitative responses of practitioners only. Between twenty-three and eleven responses per question.
3. Qualitative Semi-Structured Interviews. Used to triangulate quantitative responses of employees. Five interviews total.

The researcher’s first looked at the the quantitative results by identifying the main differences between how practitioners and employees experienced AC in relation to Holacracy. All the aggregate data from all methods and both sample groups were then explored to answer the research question of how Holacracy contributes to Social Sustainability. The following results highlight three key findings of the primary research.

Exploring the difference in how the two sample groups experience social sustainability in relation to Holacracy

From the quantitative data, it was clear that on average practitioners experienced all of the AC elements more positively than employees. Each AC element was experienced differently by the two sample groups, resulting in some interesting data in accordance to supporting the research question.

How does the organizational structure of Holacracy contribute to social sustainability?

Overall, the elements of Adaptive Capacity were experienced in a positive way. Diversity received the lowest scores on average, whereas self-organization received the highest with a total average of 4.4 out of 5, indicating that it was experienced as somewhat to very positive or having a slight to significant increase in relation to all tested components of Holacracy. This positive reception was reinforced by the fact that self-organization received virtually no responses reflecting a negative experience or a decrease in relation to all four components of Holacracy. The average results can be seen in the following table.



*Average Scores of AC elements in response to experience of Holacracy
(1-2 decrease, 3- no effect, 4-5 increase)*

Sub-Codes

Through the research process, certain themes arose in the open-ended and interviews that have an overarching impact on how Holacracy is experienced. In order to account for these impacts, sub-codes were created to capture and organize this information. These included implementation, leadership and organizational size.

Discussion

As noted in the results, there was an overall trend of differences in the average responses between the two groups. The average perception of AC elements, in relation to Holacracy components, was more positive for practitioners in nineteen instances out of twenty. This trend essentially shows that on average, practitioners view Holacracy more favorably than employees. More specifically, practitioners view Holacracy to contribute more positively to social sustainability than their counterparts, at least through the lens of AC.

In regards to the FSSD, the AC elements are the foundation that form the social sustainability principles that provide an operationalized definition of social sustainability. When stepping back to view the potential contributions that Holacracy has on the wider system and the structural obstacles that it can help remove, it is important to understand how an impact on adaptive capacity has an effect on the SSPs. Throughout the research, Holacracy's strongest impact on AC was the individual's experience of self-organization, which through the SSP lens can in turn be linked to removing structural obstacles to influence, competence and impartiality. A summary of the relationship between all AC elements and SSPs is included in this work.

Throughout the research, there was found to be an overarching theme around the implementation process of Holacracy and the way it largely influenced people's experience of the organizational model. It is an important point to highlight in regards to decision-making and self-organization, as the results have shown that if the implementation process is done in a top-down directed way, it can leave people passively receiving the structure- feeling lost and confused.

Conclusion

The most notable finding of the research, was the clear impact that all of the Holacratic components had on self-organization. This, as discovered in the literature, is essential for the long term survival of the socio-ecological system, as all living systems are naturally self-organizing. It was also found that on average, practitioners view Holacracy to contribute more to social- sustainability than employees working within a Holacratic organization. From this result, the researchers suggest that to implement Holacracy effectively, practitioners could benefit from inviting all members of the organization into the 'why' aspect of the transition process, so that everyone involved can make sense of the new structure together. Although the explicit intention of developing a socially sustainable way of organizing is not made by the developers of Holacracy, this study has clearly shown where alignments exist which point to areas that lead in the right direction. In this way, this study has the potential to inform the development of Holacracy in a more socially sustainable way and therefore the larger system in which it exists. Further work is required to gain a deeper understanding of Holacracy's contribution to social sustainability, however, the researchers see this report as an essential bridge to understanding the role of organizational structure in creating a sustainable world.

Glossary

Adaptive Capacity: The capacity to change and adjust to the sometimes quickly-changing environment and is the essence of what allows them (socio-ecological systems) to be sustainable over the long run (Robert et al. 2015, 109).

Agile: An organizational structure that uses an iterative method of managing design and build activities. Used in engineering, information technology and other business areas that aim to develop new products or services in a highly flexible and interactive way.

Apex agent: In an organizational context, an individual who has responsibility and decision making power for a number of other sub-groups and actors.

Backcasting: A strategic planning tool that is accompanied by a vision of success and an analysis of the current reality

Check-in: A space in a meeting where people can share any personal concerns or distractions with the group.

Common Meaning: Human's desire to work towards a purpose and express themselves individually and as a group.

Community of Practice: An online platform developed to provide support and offer guidance to questions for anyone practicing Holacracy.

Complexity: Situations that are unordered, fluid, unpredictable. Answer/solution may exist but don't know what they are. Requires complex adaptive systems thinking to solve. (McLeod and Childs 2013).

Component: In this study a component refers to the selected parts that are key to Holacracy as an organizational structure; they include, Evolving Governance, Distributed Leadership, Decision Making Authority, and Working with a Purpose.

Culture: The explicit or implicit level of personal relationship facilitation that an organization fosters.

Decision Making Authority: In Holacracy, people have the ability to make decisions and take action within specific Domains as defined by their Role(s).

Distributed Leadership: Describes the dispersion of decision making power to all employees in an organization. This is facilitated by Roles and the circle structure of Holacracy. For Roles, having a clear purpose, domains and accountabilities allows for distributed leadership.

Diversity: A variety of ideas and responses to a changing environment.

Dynamic Capabilities: “The firm’s ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments” (Teece et al. 1997, 515).

Employees: People that work within a Holacratic organization and that are not trained practitioners of Holacracy.

Evolving Governance: In Holacracy, the structure of an organization evolves to keep up with the changing environment. Frequent iterations occur in “governance meetings” where Roles and processes are revised given what’s actually happening in the team.

Framework for Sustainable Development FSSD: A transdisciplinary framework using complexity science and systems thinking to guide planning endeavors in an ecologically and socially sustainable way.

Glassfrog: HolacracyOne’s proprietary online platform for organizing circles and roles.

Governance meetings: Meetings in which members of a circle can address and modify issues around roles, policies and the elected core roles of the circle (facilitator, rep link, secretary). Involves a check-in, administrative concerns, building an agenda, process each agenda item with Integrative Decision Making Process (includes: present proposal, clarifying questions, reactions, amend & clarify, objection round, integration), and closing.

Hierarchy: A system where there is clear order and increasing levels of power and control as rank increases.

Holacracy: A system of organizational structure that relies on distributed networks of circles and self-organizing teams rather than traditional management hierarchies.

HolacracyOne: The founder of Holacracy, Brian Robertson’s consultancy firm that holds the trademark for Holacracy. They provide training and advice on how to implement Holacracy into organizations.

Integrative decision making: The process utilized in Holacracy to bring multiple voices into a decision. A person can bring an idea to a meeting and receive the support and input they need from the roles that have the appropriate knowledge and expertise for such decision.

Learning: Allows humans and systems to continuously learn, sense, develop and prototype responses to changing environments individually and together.

Organizations: Structured constellations of individuals working towards a common purpose.

Practitioners: Individuals who are formally trained in the practice of Holacracy.

Researchers: The authors of this paper: Isaiah Archer, Sarah Forrester-Wilson, and Lewis Muirhead

Resilience: The capacity of a system to absorb disturbance and re-organize while undergoing change so as to still retain essentially the same function, structure, identity and feedbacks (Walker et al. 2004) from (Missimer 2015, 109).

Resilient: The quality that describes a system’s ability to recover from negative or destructive circumstances.

Roles: The Holacracy equivalent of a position in a company; consists of a purpose, a domain, and accountabilities.

Self-organization: The coordination that develops from the local interactions between you and your colleagues.

Social Capital: “The norms and networks that allow people to act collectively” (Woolcock and Narayan 2000, 225).

Social Cohesion: “The willingness of members in society to cooperate with each other to survive and prosper” (Stanley 2003, 5).

Social Fabric: Based on trust, it describes the linkages between people throughout a social network.

Social Sustainability: A state where a system or an organization does not violate any of the 5 social sustainability principles.

Social System: In the case of human social systems, human social agents (individuals, groups, formal organizations, etc.) and the relationships among these social agents.

Socio-ecological system: The society and biosphere and the complex interactions that occur between them.

Structural Obstacles: “[S]ocial constructions - political, economic and cultural - which are firmly established in society, upheld by those with power and, due to a variety of dependencies, difficult or impossible to overcome or avoid by the people exposed to them” (Missimer 2015, 44)

Subsystem: A self-contained system within a larger system.

Sustainability Challenge: The combination of systematic errors of societal design that are driving humans’ unsustainable effects on the socio-ecological system, the serious obstacles to fixing those errors, and the opportunities for society if those obstacles are overcome.

Sustainability Principles: A set of principle that describe the necessary conditions that must not be violated in order for sustainability to be achieved.

Sustainability: A state in which society has eliminated the violations to the boundary conditions that describe a sustainable society. Boundary conditions are defined by the sustainability principles.

Sustainable Development: The active transition from the current globally unsustainable society towards a sustainable society. Once the transition to a sustainable society is complete, sustainable development also refers to further social development within society.

Sustaincentrism: A theory that calls for a more equal view of the importance between humans and the natural world when determining societal action.

Systems-thinking: The organized study of systems, their feedbacks, and their behavior as a whole.

Tactical meetings: Efficient weekly meetings focused on the operations of a circle or multiple circles that involve a check-in, a checklist review, a metrics review, project updates, triage issues (sorting and prioritizing issues) and a closing round.

Teal: An umbrella term that describes businesses which display the three requirements of self-management, wholeness and evolutionary purpose.

The Strategic ABCD Planning Process: A strategic tool for backcasting from Sustainability Principles.

Tribe Space: Holacracy term, describing a non-structured meeting, for people to interact on a more personal level.

Trust: The attitude enabling people to rely on each other and formulate a positive expectation towards one another.

Working with a purpose: Purpose clarifies the identity and intention of a Role or Circle in Holacracy. Working with a purpose orients the action of a Role even absent any other explicit Accountabilities, policies, strategies, priorities, or resources.

List of Abbreviations:

AC Adaptive Capacity

BTH Blekinge Institute of Technology

ESP Ecological Sustainability Principle

FSSD Framework for Strategic Sustainable Development

MSLS Masters in Strategic Leadership towards Sustainability

RQ Research Question

SSD Strategic Sustainable Development

SSP Social Sustainability Principle

SP Sustainability Principle

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1 Introduction

1.1 The Sustainability Challenge

The ability to maintain equitable relationships between people and related societal impacts of inequality, have been identified as some of the most pressing problems of our age (Gu et al. 2014; Stiglitz 2009). Sustainability encompasses social and ecological domains, and because of their interdependency on one another, they need to be addressed simultaneously. The “systematic errors of societal design that are driving human’s unsustainable effects on the socio-ecological system” and the opportunities for overcoming those errors, is what Robèrt et al. have termed the sustainability challenge (2015, 273). The human dimension of this challenge is clearly identified by the World Commission on Environment and Development’s definition of sustainable development, “development that meets the needs of the present without compromising the ability of future generations to meet their needs” (WCED 1987). The focus on human needs has been the rallying point for academics working on what constitutes social sustainability (Bostrom 2012), although what constitutes human needs is still up for discussion. The shift in understanding the whole sustainability challenge, as both a social and ecological one, has resulted in the study of social sustainability going from nascent to salient.

Before this shift, unsustainability was often dominantly associated with only the ecological impacts on the earth (Cuthill 2010; Dillard et al 2009) whereas social sustainability, has up until recently, not been equally explored (Boström 2012; Vifell and Soneryd 2013; Lehtonen 2004). Vallance et al. (2011) argue that the various contributions to research surrounding social sustainability have led to a degree of “conceptual chaos” (342). However, some analogous concepts show up regularly in the literature, such as social-cohesion and social-capital. They are respectively defined as “the willingness of members in society to cooperate with each other to survive and prosper” (Stanley 2003, 5) and “the norms and networks that allow people to act collectively” (Woolcock and Narayan 2000, 225). The relationship between these concepts and social sustainability is robust and commonly found in the literature (Ranjan 2010; Rogers et al. 2013; Yoo and Lee 2015; Adhikari and Goldey 2010; Lehtonen 2004). These terms are not synonymous with social sustainability, as it is specifically defined in this work, but offer considerable similarities and are useful guides in identifying relevant information in the literature. At a societal level, a study looking at the relationship between social capital and responses to climate change-related issues found that societies with higher levels of social capital, showed increased resilience when faced with environmental catastrophe (Adger 2003). This further demonstrates the link between terms such as social capital to social sustainability, because, like social capital, social and environmental sustainability are inexorably interconnected.

When looking at sustainability through the lens of social issues, it is helpful to consider the basic mechanisms that can prevent societies from achieving social sustainability and maintaining or improving social capital. Structural obstacles are an example of such a mechanism that systematically prevent individuals from providing for their basic needs (Missimer et al. 2016a). Missimer et al. define *structural obstacles* as “...social constructions - political, economic and cultural - which are firmly established in society, upheld by those with power and, due to a variety of dependencies, difficult or impossible to overcome or avoid by the people exposed to them” (2016b, 6). Structural obstacles are a key concept in the

Framework for Strategic Sustainable Development (FSSD), a transdisciplinary framework using complexity science and systems thinking to guide planning endeavors in an ecologically and socially sustainable way. The FSSD is a scientifically rigorous peer-reviewed framework, which has been continually developed and tested over the past twenty-five years. It was created to provide a clear operational definition of sustainability (principles), along with guidelines on how to create and reach a shared vision as defined by these principles. The researchers will return to explain the usefulness of complexity science and systems thinking later in this introduction, along with a rationale explaining why a principled definition of social sustainability, defined by the FSSD, was used as a key frame for the research.

1.2 Organizations and Sustainability

The eroding global social system can be attributed to how societies function as a consequence of their design (World Bank 2012). A way to understand such design is to look at organizations, which are important subsystems within the unsustainable global socio-ecological system (see Figure 1.1). Organizations represent a vast array of ways humans collaborate towards a specific outcome. They have been defined as “a social unit of people that is structured and managed to meet a need or to pursue collective goals...organizations are open systems—they affect and are affected by their environment” (Business Dictionary 2016). Organizations play a major role in sustainable development, because of their economic power, influence on global governance and crucial impact on their own workforce (Shrivastava 1995). Moreover, many modern organizations contribute, on a massive scale, to depleting natural resources and ecosystem services, which are having a detrimental toll on society and the environment (Senge et al. 2008). Fortunately, it is possible that the way in which humans organize can also be part of the process of reconciliation with the natural world and to begin helping heal some of the damage that has been caused (Shrivastava 2014).

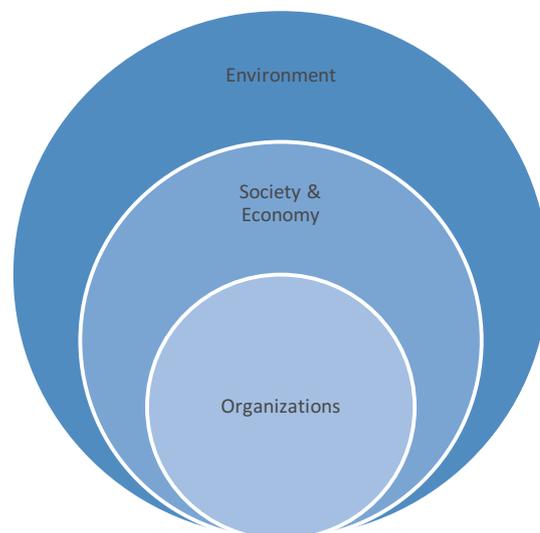


Figure 1.1. Organizations as nested subsystems

At an organizational level, it has been shown that organizations play an influential role in regards to social capital, where people’s experience of their workplace can heavily increase or decrease the overall capital of the community (Nahapiet and Ghoshal 1998). Social capital has also been identified as a “potential source of competitive advantage for all organizations” (Lee

2009, 258). Several large scale issues across a wide range of sectors relating to the social realm of sustainability exist today. These include an increase of global inequality of opportunity and wealth, along with associated societal issues such as eroding levels of trust (Keeley 2015; Edelman 2016). Organizations, by recognizing the imperative nature of addressing these issues, could ensure that they not only increase their level of social capital, secure a more financially sustainable position in the market, but also present an influential example of change for the wider community.

One way of clearly viewing this interconnectedness between organizations and the wider global social system, is to understand their relationship as a complex adaptive system representing the interactions between people and the organizations in which they are a part (J. Miller and Page 2007). When considering sustainable development and its relationship to organizations, it is important to recognize that ecological and social systems interact and behave in complex ways. Because of this, they cannot be analyzed using linear logic (Max-Neef 2005; Rockström et al. 2009). Capra (1985, 475) describes nature from a systems thinking approach as, “an interconnected, dynamic network of relationships, in which any 'parts' are merely relatively stable patterns, and natural phenomena are described in terms of a corresponding network of concepts, in which no part is more fundamental than any other part.” Similarly, social systems consist of dynamic networks of interconnected relationships, which must be considered when studying organizations as they are functioning social systems in themselves (J. Miller and Page 2007).

If recognized in this way, resolving the barriers that exist within organizations will, therefore, have wide-reaching impacts on the lives of billions of people. This research looks at organizations and the way they operate as a paradigm, therefore any change or transcendence of that paradigm has the potential to impact one of the top two leverage points identified by Donella Meadows (1999) for how to change a system. Leverage points are places in complex systems where relatively small shifts can reap large changes across the system (1999). In relation to organizations' move towards sustainability, de Lange et al. (2012, 154) call for “additional urgent and far-reaching action.” De Lange identifies the importance of reporting and monitoring, innovation for achieving sustainability and the spread of good practices internationally (2012). Addressing an underlying issue of the sustainability challenge, ‘sustaincentrism’ suggests that it is the “conceptual division and resultant disassociation between humankind (and its organizations) and the remainder of the natural world” that is the key leverage point, which if addressed will shift the mental paradigm of the institutional world (Gladwin et al. 1995, 874-75). The researchers recognize the importance of recognizing unsustainability as a multi-dimensional issue, one that incorporates the ecological and social element and also the relationship between the two. In order for organizations to build solutions to the sustainability challenge, it is essential that they view themselves as inherently woven into both the ecological and social spheres.

As well as this mental paradigm shift, for sustainable development to take place in an effective way, the dominant (growth imperative) worldview held by many managers and leaders must transition to a more productive, fulfilling and meaningful model (Shrivastava 2014). As Ackoff (2011, 9) has described, “our current managerial and administrative problems were generated by a world that operates as a social system; but we have been trying to solve them using approaches based on mechanistic or organismic views of the world.” Systems thinkers, such as Ackoff, have recognized this mismatch in thinking as a key driver of the emerging disillusionment with organizational life. Stevenson (2012, 86) agrees, suggesting organizational leaders too often fail to use systemic and complexity thinking, and this causes

them to misunderstand the “landscape by using distorted or inappropriate maps that lead them to repeat the errors that have often created the complex issues they face.” Systemic and complexity thinking is an emergent field in organizational theory and its integration into mainstream organizational theory is a necessary step towards sustainability being understood in the complexity context.

Complexity science provides a way of viewing the world that acknowledges the interactions and connectivity between elements in a given natural system, as crucial to understanding the whole (Andersson 2014). In complex systems, cause and effect are not directly related in linear ways and therefore small changes can have large unpredictable impacts. As variables so often change in these systems, a planning approach of command and control is ineffective, but is still commonly implemented in contemporary organizational models (Adler 2001). Hence, forecasting into the future, and planning based on current scenarios in complex systems, tend to fall short of their intended outcomes. Addressing this lack and creating the capacity for organizations to learn in response to complexity has been the focus of work in organizational theory for the last few decades (Senge 1990). It is clear that when dealing with complexity, an alternative approach to both planning and strategy is necessary. Organizations play an essential role in the transition to a more sustainable society and as Senge (1990) identified, it is the essential aspect of learning that will enable organizations to deal with complexity and evolve in order to be successful into the future. The FSSD addresses this need for learning in response to complexity, but also provides an effective strategy to move organizations and the wider social-system, towards sustainability.

1.3 Framework for Strategic Sustainable Development (FSSD)

In contrast to forecasting, which tends to fall short of its intended outcomes when planning in complex systems, the FSSD uses the strategic planning methodology of backcasting, which lends itself well to tackling the sustainability challenge, as it is designed to handle complex issues in a systematic and coordinated way (Robèrt and Holmberg 2000). For organizations using backcasting, it is critical that the vision of success, or desired outcome, is shared among all members of the organization for the planning process to be effective. A way to help define the vision of success in backcasting is through basic principles. The future cannot be foreseen in a complex system, but its principles can. These principles can be understood as boundary conditions for redesign, in that for a plan to be successful, it must at least comply with the principles. For organizations, these boundary conditions are extremely valuable, in providing a structured frame to help navigate through complex challenges, such as unsustainability.

In response to this need, the sustainability principles (SPs) were created through the development of the FSSD, an iterative process that over twenty-five years has distilled the elements of what constitutes basic principles for human survival on earth (Broman and Robèrt 2015). The principles are scientifically agreed upon, non-overlapping and general enough to be used for strategic planning in organizations across a variety of sectors, and are necessary and sufficient to achieve sustainability. There are three ecological principles and five social principles, which were developed in response to the basic mechanisms that result in the destruction of the socio-ecological system. The three ecological sustainability principles (ESP) include:

“In a sustainable society, nature is not subject to systematically increasing ...” (Missimer et.al 2016a, 2)

ESP 1 ... concentrations of substances from the earth’s crust (such as fossil CO₂ and heavy metals),

ESP 2 ... concentrations of substances produced by society (such as antibiotics and endocrine disruptors),

ESP 3... degradation by physical means (such as deforestation and draining of groundwater tables),

“In a socially sustainable society, people are not subject to structural obstacles to” (Missimer et.al 2016b, 7)

SSP 1. ...health. This means that people are not exposed to social conditions that systematically undermine their possibilities to avoid injury and illness; physically, mentally or emotionally, e.g. dangerous working conditions or insufficient wages.

SSP 2. ...influence. This means that people are not systematically hindered from participating in shaping the social systems they are part of, e.g. by suppression of free speech or neglect of opinions.

SSP 3. ...competence. This means that people are not systematically hindered from learning and developing competence individually and together, e.g. by obstacles for education or insufficient possibilities for personal development.

SSP 4. ...impartiality. This means that people are not systematically exposed to partial treatment, e.g. by discrimination or unfair selection to job positions.

SSP 5. ...meaning-making. This means that people are not systematically hindered from creating individual meaning and co-creating common meaning, e.g. by suppression of cultural expression or obstacles to co-creation of purposeful conditions.”

Although, organizations play a vital role in addressing the whole sustainability challenge both encapsulating the ecological and social aspects, it is the social dimension that will be the focus of this paper. Therefore, it is the five social sustainability principles of the FSSD that will be utilized.

1.5 Adaptive Capacity

The social sustainability principles were built by first defining the essential elements that make up a healthy and resilient social system. Folke defines resilience as “the capacity of a system to absorb disturbance and re-organize while undergoing change, so as to still retain the same function, structure, identity and feedbacks” (2006, 259). More simply, it could be seen as a system’s ability to adapt. The ability to manage resilience can be referred to as adaptive capacity. Missimer defined adaptive capacity as, “the key feature that allows complex systems to continue despite the constant change and uncertainty within them and in their environment” (2016, 5). The key elements that were identified as essential, in achieving what is known as adaptive capacity (AC), were diversity, self-organization, learning, common meaning and trust. These, in turn, were how the social sustainability principles were derived, by questioning what structural obstacles could result in these elements becoming eroded (ibid).

Table 1.1. Adaptive Capacity Elements

Trust	Often seen as the most important variable in achieving a resilient social system. Can be defined as the connecting substance that keeps a system together. As Missimer (2015, 43) states, “if trust between various individuals does not exist, it is difficult or impossible to achieve collective learning, diversity and self-organization in a system.” Therefore, creating trust in a system is a prerequisite for achieving all other elements of adaptive capacity.
Diversity	When facing an ever-changing environment, diversity is an essential element of resilience. When more diverse options are available, there is more opportunity for a system to appropriately adapt to constant change. More voices equal more diversity. More diversity equals a better resilient long -term strategy.
Self-organization	Described by Missimer (2015, 110) as, the idea that organization can happen without “system level intent or centralized control.” Self-Organization is essential for a system to adapt quickly; sometimes decisions are needed to be made immediately and without always needing to be approved by a top-down power structure.
Common Meaning	Like trust, common meaning is a unique element to human social-systems. Missimer et al. (2016a, 6) state, “humans are a meaning-making and meaning-seeking species...this seems to be wired into our brains.” Without it, our brain “signals extreme discomfort and motivates the search for renewed purpose and hence meaning” (ibid).
Learning	An essential element when dealing with constant change. Learning refers to a system being able to grow and change, a key part of adaptation.

As social systems that have a large impact on not only their own workforce, but on the whole of society in general, organizations have a role in creating these adaptive conditions. In order for organizations to move onto a sustainable trajectory, understanding the contributions and obstacles to these elements of adaptive capacity is paramount. For example, the element of learning is identified by Kayes (2015) as key for organizations responding to crisis. The key variable that Daft and Lewin (1993) refer to, is the organizational design itself. The design is a hugely influential factor for organizations to consider when looking to achieve and manage resilience.

1.6 Organizational Structures and Sustainability

It is important to understand that organizations manifest themselves in a number of forms. These include, but are not limited to businesses, non-governmental organizations (NGOs), governments and charities. The manner in which these groups interact and collaborate is determined by the method – the organizational structure – they use to internally distribute power. The importance of organizational structure to sustainability is found throughout the literature (Wu et al. 2013; Gladwin et al. 1995; de Lange et al. 2012). A field of study known as dynamic capabilities, identifies the organizational structure as key to successful strategic and sustainable growth in the global and multi-faceted marketplace of the world today (Teece 2009; Wu et al. 2013). Further to this, dynamic capabilities describe the necessary elements for an organization to remain competitive, including cross-functional R&D teams and knowledge transfer routines across departments (Teece 2009). The issue of knowledge decay – where information is degraded as it moves up and down a hierarchy – is one example where

structure has a direct impact on how an organization functions and therefore how resilient it is. Designing or selecting an organizational structure that best allows people to function effectively and efficiently is of huge importance to the long-term success of organizations across all sectors.

An early example of organizational structure is hierarchy, which is still dominant in today's society (Horling 2005). Hierarchy is an essential element of conventional control practice, which also includes vertical communication and permanent constellations of people (e.g. departments, units) (Romme 1999). These elements all make up the hierarchical model as we know it today, with middle managers overseeing a number of sub-managers and then reporting back to senior executives. The hierarchal structure is shown below in Figure 1.2. Developed in the mid-1800s, this model facilitated the rapid development of manufacturing and technology resultant from the industrial revolution (Chandler 1977). Hierarchy allowed businesses to operate efficiently and across numerous departments and at the time the model was seen as necessary. The attitude of the time is evident in this quote: "one of the most important and basic assumptions of 'classical organizational theory' was that human beings would not give their best effort, work efficiently, or be fair and evenhanded in their work, unless they were tightly controlled and directed" (Glisson et al. 2007, 125). As society moves further into the 21st century, and as global issues such as unsustainability are becoming more evident, the hierarchical structure and its accompanying attitude is proving to be antiquated (Balogun and Johnson 2004; Schilling and Steensma 2001).



Figure 1.2. Hierarchical Organizational Structure

It is important to note that there are multiple forms of hierarchy, which have varying effects on the way people organize themselves and express themselves within an organization. Parker (2014) describes two key types of hierarchy; dominator hierarchy and actualization hierarchies. He states that during the post-modernist phase people tended to "utterly fail to distinguish between dominator hierarchies, which are indeed nasty, and actualization hierarchies, which are the primary form of natural growth, development, and evolution in the world— atoms to molecules to cells to organisms, for example" (2014, 260). Although necessary to recognize these inherent forms of natural hierarchies found in society, it is the 'dominator hierarchy' mentioned that is the cause of concern when addressing the sustainability challenge, in particular towards social sustainability (Johnson and Buckley 2014). The dominator hierarchy can create a feeling of powerlessness over one's work, as it removes individual decision-making capabilities and can lead to disengagement in the work place (Ford et al. 2014).

There is literature now suggesting that in facing severe societal challenges, such as unsustainability, the hierarchal organizational paradigm is insufficient (Adams et al. 2011).

Self-management, innovation and diversity are just a few of the elements that are seen to be limited by the hierarchical model, and are all essential when working towards sustainability (de Lange 2012). Adams et al. further state that “the traditional methods of top down directing, supervision and control do not work (if they ever did). Paradigms of command and control are aimed at compliance – making employees follow the rules – to eliminate uncertainty and manage change top down in a more or less predictable manner” (2011, 166). Ouchi (1981) identifies an important failing of hierarchy in its tendency to miss important information from the lower levels of the organization that could prevent a bad decision being made by management. The inflexible nature of the hierarchical structure has also been criticized when assessing organizations’ ability in dealing with the rapid changes that society is currently undergoing. According to Maturana et al. (1999) using hierarchy can lead to an overly rigid or fragile organization, prone to single-point failures with potentially global consequences. This heavy reliance on the leader or apex agent can put an organization at a disadvantage when facing an unpredictable future.

Missimer et al. (2016b) have shown the essential need for the AC element of diversity in response to this unpredictability. The researchers posit that having a large degree of diversity enables social systems to form varying response options to meet whatever situation may arise (2016b). In addition, Missimer et al. identify diversity as an imperative strategic aspect to a system continuing over time. From this, we could see that the rigidity of the hierarchical structure, and its reliance on minimal actors, can reduce an organization’s diversity and therefore its ability to sustain itself in an ever-changing environment (Romme 1999). By returning to the AC lens, Hierarchy when viewed in this way, presents an obstacle to various elements that make up a resilient social system- the most notable being self-organization and diversity. This limitation has led directly to the need for developing alternative models (Romme 1999; Laloux 2014).

1.7 Alternative Organizational Structures

The first alternatives, to hierarchical organizational structures, appeared as technology and manufacturing evolved into the middle 20th century; Lean Manufacturing¹ was developed at the Toyota manufacturing plant out of the need to be flexible and efficient with changing market conditions (Womack et al. 1991). The Lean concept also empowered employees to create tools and find solutions within their teams rather than bringing upper management into the equation. This structure for organizing is recognized in the literature as the foundation for many of the modern alternative structures (Laloux 2014). As newer structures have developed they continue to build the capacity within organizations to respond to rapidly changing market conditions and internal situations that arise on a daily basis.

Research by A. Georges L. Romme (1999) on the development of Sociocracy – an alternative organizational structure developed in the 1970s – identifies the elements of alternative power dynamics as including, autonomous work groups, self-designing organizations, self-managing teams and cluster organizing. These elements are in direct response to the failings of the

¹ Lean Manufacturing is a systematic method for the elimination of waste from the manufacturing process by taking into account the waste involved in the process as well as waste created through unevenness in the workflow. The focus is on creating more value, where value is defined as anything the customer is willing to pay for (Womack 1991).

command-and-control systems evident in hierarchical models. Romme (1999), while describing the development of Sociocracy within Endenburg Elektrotechniek (the first company to use Sociocracy as it is known today), outlines the benefits of implementing alternative organizational structures. The impact of the structure of an organization on the actions within that organization is clearly linked, “particularly in the area of collaborative learning and vertical communication” (1999, 823). Sociocracy utilizes circles to organize people and distribute power throughout an organization (1997). This circularity facilitates the self-determination that has been deemed essential for power to be democratized through an organization (Dahl 1989). Factors that have shown benefits from the use of the circle structure include, a more humane way of relating to the workplace, facilitation of cross-departmental collaboration and organizational learning (Romme 1996). The circle structure is just one way to describe how an organization is structured, but it is well researched and its benefits are documented.

Scholars in the fields of psychology, philosophy and anthropology have found that the way humans organize themselves and collaborate through history, has coincided with a shift in stages of human consciousness (Wilber 2001). The progression goes from very basic forms of organizing that rely on dominator hierarchies and have evolved through the millennia to where organizations are now displaying elements of what are known as Teal organizations – deemed by Frederick Laloux (2014) as the next stage in the evolution of organizational structure. Teal organizations involve the elements of self-management, wholeness and evolutionary purpose. Laloux (2014), an expert in the field of alternative organizational structures, explains how we have escalated our ability to view and deal with the world cognitively, morally and psychologically in stages, and each time we have successively invented a new organizational model. While the older, hierarchical, top-down power models remain in use today, select businesses have begun to display elements of Teal and are burgeoning. Businesses that have seen success as a result of Teal are documented by Laloux and range across sectors including manufacturing, IT services, health care, apparel, media and education. These businesses have shown to be adaptable in the face of change with steady returns through market fluctuations².

As society has moved into the 21st century, work done by Ken Wilber on Integral Theory has contributed to the understanding of how organizations have evolved over the millennia (Laloux 2014; Wilber 2001). Wilber describes a progression from hierarchical, top-down power dynamics to the emerging collaborative, self-organizing organizations evident today (2001). The list of alternative structures is extensive and many share similar components with each other -see Table 1.2 for a selected comparison. These models offer alternative structures, which attempt to shift away from the centralized model that hierarchy uses. One of the newest structures to be applied across a wide range of sectors is known as Holacracy. Because this structure incorporates many of the components of its precursors, the researchers have chosen to focus on Holacracy and take a deeper look at its influence on social sustainability.

² It is worth mentioning that Laloux’s work is not peer-reviewed and while the case studies he uses to demonstrate the successes with Teal structure are useful, this study has chosen to utilize sources regarding organizational theory from peer-reviewed journals to understand and describe alternative structures.

Table 1.2. Elements of Alternative Organizational Structures

	Teal *	Sociocracy	Adhocracy	Agile	Holacracy
Decision making style	Consensus/advice based decision-making	Consent and consensus-based decision-making	Distributed leadership	Distributed authority and accountability to teams for reducing bottlenecks	Integrative decision-making – multiple opinions brought into process
How they address Hierarchy	Self-management	Hierarchical circle structure; decisions that affect more than one circle are made by a higher circle made up of representatives from all affected circles	Horizontal job specialization	Cross-functional teams	Departmental circles
Governance	Open governance – employees are involved in the process of decision-making	Access to information provided to all employees; essential for decision-making process to be accurate	Highly organic structure – little formalization of behavior	Self-management – ‘just-right’ governance, oversees but doesn’t interfere	Constitutional rules of power, formalized rules, evolving governance

Holacracy

Holacracy was developed out of the need and desire for more feedback from employees. Brian Robertson, the founder of Holacracy and software entrepreneur, recognized that the conventional hierarchical model could not keep up with the speed of progress in the ever-changing technology sector. Due to this, Holacracy has been most embraced in the IT sector, and in recent years has been implemented in a diverse range of industries including a governmental agency in Washington, USA. With the launch of the Holacracy model to the world, Robertson also began HolacracyOne, a business consultancy and certification board for advising organizations and training coaches on the implementation of Holacracy. In Robertson’s book, *Holacracy: A New Management System for a Changing World*, he explains, “the underlying structure, systems and culture of a modern corporation do not allow for the rapid processing and responsiveness necessary to fully harness the power of every human sensor” (2015, 9). Holacracy, with its agile structure and fast speed decision-making process, offers an attractive alternative. As a relatively new concept, it is currently receiving a share of media attention, especially since 2015 when the multinational online shoe and fashion company, Zappos, implemented the structure (Useem 2015). Since then there has been a large uptake in business media and more research on how best to implement the structure (Reingold 2016; Mezick 2015).

It is worth noting that the implementation of Holacracy at Zappos was met with some trepidation. Their CEO, Tony Hsieh, decided, unilaterally to introduce the structure and offered severance pay to any employees that were not interested in taking on the challenge. As a result,

* Teal is an umbrella term that describes any organization that is operating under the highest level of human consciousness and uses the concepts of self-management, wholeness and evolutionary purpose.

turnover reached 30 percent for the 2015 fiscal year, a full 10 percent higher than their usual attrition rate (Lam 2016). This hierarchical implementation of the structure is in opposition to the end goal of distributed leadership throughout an organization. Business analysts have questioned whether this structure is well suited to such a large organization (Reingold 2016); Zappos has over 1500 employees. While there have not been any academic studies done on the Holacracy experiment at Zappos, it is of interest to see how the structure will work in the long term.

Holacracy's name is derived from the term Holon, which describes the idea that the human mind is both a part and whole on its own (Koestler 1989). This duality in regards to Holacracy refers to the individual in that they are a part of the organization, but are recognized for their importance as self-determining agents. Brian Robertson's book describes the distinct elements that Holacracy employs to facilitate and fully take advantage of the individual's skills and talent. These elements include, but are not limited to, Roles, Working with a Purpose, Circle Structure, Customization Through Applications, Constitutional Rules of Power, shared/distributed leadership, decision-making authority, and streamlined meetings (Robertson 2015; Laloux 2014). Through the systematic development of these elements, Holacracy has attracted over 300 organizations to take on the challenge of restructuring their operations (HolacracyOne 2016).

Holacracy replaces the traditional hierarchical organizational chart with a series of interlinked and overlapping circles (Figure 1.3), inspired directly from Sociocracy. These circles represent what would be departments in a traditionally organized business: finance, human resources, accounting, etc. The roles within each circle are assigned to individuals and consist of a 'purpose' – the 'ongoing outcome' or mission that the role is pursuing, 'domains' – one or several assets or processes of the company that the Role has exclusive control over, and 'accountabilities' – ongoing activities that the organization can expect from the role (Robertson 2015). Roles are more fluid than defined positions; you can hold more than one role at a time and are not beholden to spend all your time working within your assigned roles as long as your accountabilities have been fulfilled. Holacracy grants role-holders the ability to step out of their defined sphere of influence if they determine the need. The super-circle can represent the whole organization, or it can represent a larger department within the organization. The sub-circle is then a further categorization of the organization. Circles are not disconnected by any means; they are merely a form of organizing without placing a hierarchical importance on these delineations.

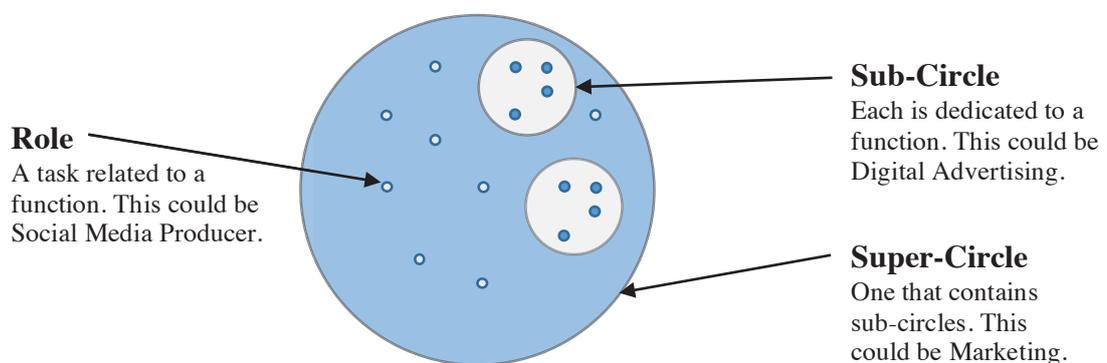


Figure 1.3. Circle Structure

Holacracy utilizes very structured and efficient meetings to inform and organize the workforce of an organization. Weekly meetings, known as tactical meetings, are held to give updates and

give clarity amongst circles. Less regular – bi-weekly or monthly – governance meetings are used to determine role functions and process decisions through the integrative decision-making process. The integrative decision-making process allows role-holders to bring ideas or actions to the group and get them processed. They are allowed to push through a decision if it is within their domain. They can listen to the objections and receive input or not. This process gives Holacracy its unique trait of not forcing consensus or oversight on decision-making.

One of the first steps, when Holacracy businesses develop their meeting strategy through HolacracyOne's proprietary online platform – Glassfrog – is to create a shared vision. As shown by Collins and Porras (1996), organizations with a strong core purpose and core values tend towards more lasting success. Holacracy stresses the importance of these guiding principles is based on the need for all employees to be directly in tune with the overarching purpose of the whole. By having employees in full understanding of the purpose of the organization they can then be trusted with agency to make decisions and act autonomously outside typical manager-led positions.

Distributed Leadership, as used by Holacracy, can be understood as dispersing the ability to be known as a leader away from just one individual to multiple agents within an organization (Gronn 2002). This aspect of Holacracy aims at addressing the issues with leadership that have been identified in the literature. Gronn (2002) identifies 3 major themes of issues with the traditional leadership paradigm including issues with leader-centrism, dissatisfaction with individually conceived leadership, and anti-leadership which identifies the very idea of leadership as repulsive. These issues impact business in a variety of ways and point to the need for redistributing leadership as Holacracy does. “[I]f leadership is to retain its conceptual and practical utility, then it has to be reconstituted in a distributed, as opposed to focused, form” (Gronn 2003, 267). This is a clear identification of the imperative for change for the structure of leadership which Holacracy aims to do through the dispersion of decision-making power.

Holacracy is unique in its ability to facilitate quick decisions and adapt to changing conditions. The way it achieves this is through decision-making authority. This way of deciding on actions in Holacracy is structured on the principle that an individual can make a decision and take action if they see the need and have considered that the decision's effect on their circle will not hinder the ability of the circle to actualize its core purpose (Robertson 2015).

In order to accommodate the fluid nature of roles, Holacracy uses a constitution to describe how decision-making power is shared around an organization. This governance model that comes along with the constitution is evolving and can adapt to the needs of processes as needs come up. The process of changing governance is done by identifying inadequacies and finding more efficient pathways to allow people to make decisions within their role, without having to go through other people.

The way that HolacracyOne caters to individual organizations is unique. As Robertson sees his creation as an operating system upgrade for organizations, so follows that there are applications, or apps, that can be applied to this system. These apps are developed and implemented by organizations themselves. They can then be shared and if HolacracyOne approves, they will be shared for use on their website. An example is an app for compensation, called the badging app. This app assigns a specific monetary value for different skills that people hold and they are then paid according to the skills they hold. The development of apps can be done through the governance meeting process.

As Holacracy has now been implemented in over 300 organizations in multiple sectors worldwide, there is potential for learning across sectors. As a structure, it has been designed with an intention to open up the capacity of every member of an organization. Looking at it through a lens of sustainability and specifically social sustainability, will offer insight into how well it is achieving this goal. Given the lack of peer-reviewed literature on Holacracy, having a detailed study on its impacts, will lend credibility to the benefits or detriments of the structure.

1.8 Research Purpose

This research was undertaken to develop an understanding of how alternative organizational models contribute to social sustainability. Specifically, it attempted to understand the human experience in organizations using Holacracy. From this understanding, the researchers' objective was to then organize that information in a useful way so that it may be used by practitioners to further develop Holacracy to be more in line with the social sustainability principles. The intended audience of this study was practitioners, those teaching and using Holacracy, who were key partners in the collaborative research to help produce practical data, to address a challenge in the pursuit of sustainable outcomes (Lang et al. 2011). The researchers aimed to use an aspect of sustainability science described by Miller et al. (2013) concerning the promotion of social learning to navigate towards sustainability. That is, to help Holacracy practitioners better understand how they can facilitate this promotion of social learning to strengthen the social fabric within their organizations. This research, as such, required the engagement of knowledge that lies outside the walls of academia and is intended to support social and institutional learning for sustainable development.

1.9 Research Scope

With the aim of understanding the contributions of Holacratic characteristics on social sustainability, the researchers decided to focus on the experiences of individual actors within organizations. In selecting organizations to examine, size was not an exclusion criterion due to the limited number of organizations currently using Holacracy. Contact was made with Holacracy practitioners and employees in small, medium, and large Holacratic organizations across a variety of sectors in North America and Europe. The respondents of the sample group, therefore, were not homogenous in their experience of Holacracy, and we acknowledge that different cultural and organizational contexts potentially informed their responses. The guiding criteria for inclusion in the sample were twofold. First, if an individual is a Holacracy practitioner (that is, they hold a certified credential) then they were included. Or, if an individual works in an organization using Holacracy, they were included. These criteria ensured that as many people as possible experiencing Holacracy first hand were included. As there is little existing research on this emerging structure, we considered it imperative to include the voices of the "knowers" (T.R. Miller 2012).

This study, by utilizing the FSSD's definition of social sustainability in an organizational management setting, provides the opportunity for new audiences to learn about the benefits of the framework. Having more people informed on the organizational benefits of improving social sustainability will encourage its development across a range of sectors. The demonstrated link between Holacracy and improving social sustainability has the potential to

attract more organizations to either investigate and implement Holacracy, or look into how Holacracy has made a positive impact, then take those pieces of insight into the way they structure their internal operations.

1.10 Research Question (RQ)

The context of organizational structures' impact on social sustainability, along with the increasingly popular organizational model of Holacracy, led the researchers to formulate the following research question:

How does the organizational structure of Holacracy contribute to social sustainability?

2 Methods

2.1 Research Design

The methodological approach chosen for this study can be described as an “interactive” model, which is based on Maxwell’s Qualitative Research Design. Maxwell argues that in qualitative research, any element of the design should be open to reconstructions and adjustments in response to developments in the research or of other components of the design (Maxwell 2012). We valued the flexibility of this approach because it echoed the reflexive nature of research activities and the nonlinear relationship among the components of a design. Moreover, this interactive approach conceptualizes the nature of the design components of *goals*, *conceptual framework*, *research questions*, *methods* and *validity* as different parts of an interconnected whole, which each simultaneously influence all of the others. The relationship between these five components is displayed in *Figure 2.1*.

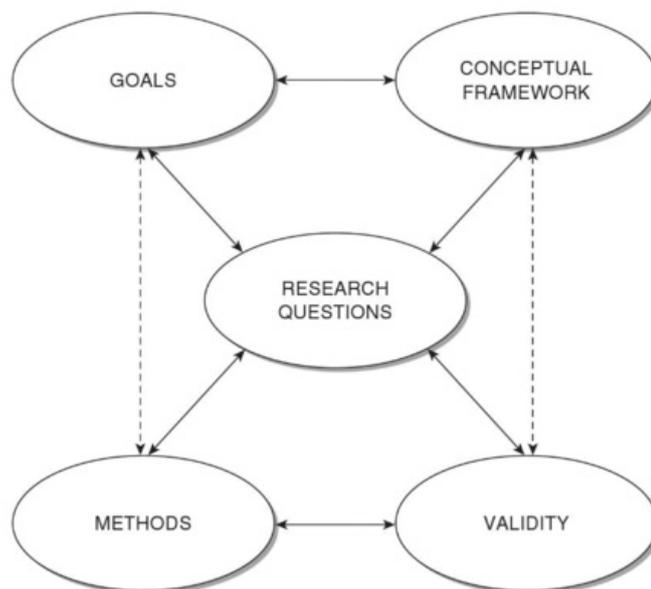


Figure 2.1 Maxwell’s Interactive model of research design (Maxwell 2012).

2.2 Research Approach

The research was designed to occur in four phases, each one aiming to address a specified step towards answering the research question.

Phase 1: Exploratory Interviews and Document Analysis

The first phase had the goal of understanding the details of two different concepts, thus allowing the comparison of them to one another. These concepts are characteristics of the organizational model of Holacracy, and Strategic Sustainable Development, particularly in relation to social sustainability. To achieve this, the researchers used a combination of

document analysis and personal conversations with experts in Holacracy and Social Sustainability. The following table gives an overview of the data sources employed to build an understanding of the two concepts.

Table 2.1 Background Research Sources

Literature	Interviews
Robertson, Brian. <i>Holacracy: The New Management System for a Rapidly Changing World</i>	Sustainability Researcher
This book, by the creator of Holacracy, gives an overview of how Holacracy was developed and why it uses the elements that it does.	Individual recently completed PhD research in social sustainability and understands the background human basic needs element that informs the theory.
Laloux, Frederick. <i>Reinventing Organizations.</i>	Certified Holacracy Coach
The seminal book in the field of Organizational change in the current era. Laloux covers Holacracy and gives case-studies of organizations using the structure.	This person runs a business that uses Holacracy and advising other companies on how to implement Holacracy. They are also a practitioner of the FSSD.
Missimer, Merlina. <i>Social Sustainability within the Framework for Strategic Sustainable Development.</i>	Holacracy Practitioner
This Doctoral thesis contains descriptions of the background of Social Sustainability essential to our concept development.	This individual is the driving force behind implementing Holacracy in their company. They began with a self-developed version of the structure and have steadily integrated more elements.

A well-rounded understanding of the key concepts used in Holacracy was gained through the literature review and conversations with the researchers’ partnering Holacracy coaches. This was done with support from a Certified Holacracy Coach, who agreed to support throughout the research with information as a Holacracy practitioner, employee and FSSD consultant. Their knowledge of the two concepts, was a helpful resource for the researchers during this first phase. This work aligned with Phase A described by Lang et al.’s (2012) work on Transdisciplinary Research in Sustainability Science; a collaborative research team was built around a shared understanding of the sustainability problem being addressed.

Phase 2: Conceptual Framework Development

Continuing from the investigation into the underlying concepts behind Holacracy and Social Sustainability, the second phase of the research focused on developing the framework for gathering and interpreting data from the real world. To achieve this, the researchers applied the concepts of the FSSD.

Understanding the sustainability challenge requires a systems perspective that considers the contributions to unsustainability as a function of systematic increases and structural obstacles that result from the imperfect design of the overarching system. A principled definition of success, as is used in the FSSD, is helpful in the context of action planning, to address complex systemic challenges. Complex adaptive systems are characterized by uncertainty, unpredictability and change, which requires flexibility and adaptability in response to the system to maintaining itself over time (Phelps 2014). However, for pragmatic and practical

reasons of seeking how to most effectively answer the research question, attention was focused more narrowly on individual experiences. Aggregate data could then be taken of these individual experiences and used to extrapolate how the larger group—Holacracy users in general—experience Holacracy in relation to social sustainability at a systems level.

In order to develop the questionnaire for Phase 3 of this research, the researchers chose to test three different conceptual frameworks to communicate social sustainability. They were, the elements of adaptive capacity (AC), the Fundamental Interpersonal Relations Orientation (FIRO) and the social sustainability principles (SSPs). The first two concepts, AC and FIRO, comprise the essential aspects from which the SSPs were derived. The AC elements include how people experience trust, self-organization, learning, common meaning and diversity. FIRO examines the fundamental aspects that form “well-functioning teams based on trust and trustworthiness” (Missimer et al. 2016b, 5). These aspects are determined by whether each team member experiences a feeling of significance, competence and of being liked. Finally, the researchers formed a questionnaire around the five SSPs, as listed in the FSSD description. In all three questionnaires, the researchers intentionally kept the language unique to the concept, to explore what was most successful when applied to the context of Holacracy.

After receiving peer and expert feedback, the researchers decided to apply the lens of adaptive capacity to their final questionnaire. This was because from the feedback received, it was clear that the elements expressed through the concept, were the most tangible for the individual to grasp in regards to their experience in a group. Trial participants explained that they struggled to connect on an individual level, to questions such as whether they felt exposed to social conditions that systematically undermine their possibilities to avoid injury and illness (SSP 1). Whereas, the questions regarding the levels of trust that they experienced in their workplace between themselves and their colleagues (AC), felt much more comprehensible. Because of this, the researchers felt using the conceptual lens of adaptive capacity would provide them with a more valid response, relating to the participants own personal experience of each of the elements. For the purpose of this research, the five AC elements were defined as follows (*Table 2.2*).

Table 2.2. Research Definitions of Adaptive Capacity

Element of AC	Research Definition
Diversity	A variety of ideas and responses to a changing environment.
Learning	Allows humans to continuously respond to changing environments individually and together.
Self-Organization	The coordination that develops from the local interactions between you and your colleagues.
Common Meaning	Human's desire to work towards a purpose and express themselves individually and as a group.
Trust	The attitude enabling people to rely on each other and formulate a positive expectation towards one another.

In order to assess Holacracy, the researchers wanted to synthesize its components down as concisely as possible. To do this, interviews were conducted with a certified Holacracy coach to get a sense of what were the best ways to codify what makes Holacracy unique and functional. Through this process, the researchers were able to integrate the elements of Roles, Working with a Purpose, Circle Structure, Customization through Applications, Constitutional Rules of Power, Shared/Distributed Leadership, Decision-Making Authority, and Streamlined Meetings into four distinct elements. As seen in the following diagrams (*Figure 2.2*), some

elements retained their independence and others were integrated into a single recognizable component. The component of Evolving Governance was suggested by the Holacracy coach, because it is the dynamic nature of governance that is really important to the success and uniqueness of the structure.

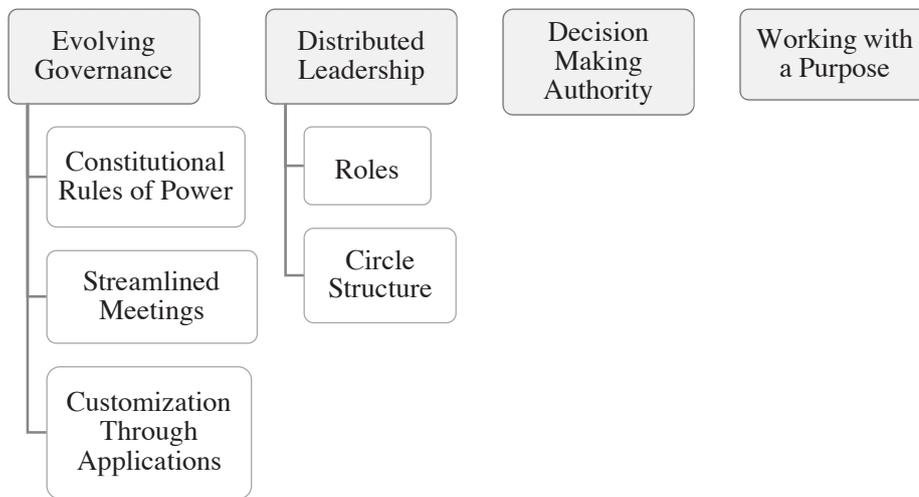


Figure 2.2. Holacratic Components

To define each component, the researchers went through an iterative process, first writing a description and then sharing it with an expert Holacracy coach and advisor. This was done to ensure the components made sense and were relatable to someone experiencing Holacracy on a day-to-day basis. It was important that the definitions resonated not only with individuals formally trained in Holacracy, but also employees who may have only received a 2-3 hour on-boarding session in the use of the model. In the end, four concise and well-understood definitions were decided upon; described as follows:

Table 2.3. Holacratic Components

Component of Holacracy	Research Definition
Evolving Governance	In Holacracy, the structure of an organization evolves to keep up with the changing environment. Frequent iterations occur in “governance meetings” where Roles and processes are revised given what’s actually happening in the team.
Distributed Leadership	Describes the dispersion of decision-making power to all employees in an organization. This is facilitated by roles and the circle structure of Holacracy. For roles, having a clear purpose, domains and accountabilities allows for distributed leadership.
Decision-Making Authority	In Holacracy, people have the ability to make decisions and take action within specific domains as defined by their role(s).
Working with a Purpose	Purpose clarifies the identity and intention of a role or circle. Working with a purpose orients the action of a role even absent any other explicit accountabilities, policies, strategies, priorities, or resources.

Following an iterative and well-informed process, the researchers concluded on a conceptual framework formed of the following aspects. To communicate social-sustainability, the five *elements of adaptive capacity* were used. This included trust, learning, self-organization, diversity and common meaning. To communicate the core parts of Holacracy, four *components*

of *Holacracy* were formed, which included Evolving Governance, Distributed Leadership, Working with a Purpose and Decision Making Authority. Together, these set the foundation on which the research was based.

Phase 3: Research Instrument Development

The third phase of the research consisted of developing and issuing a final version of the questionnaire to be taken by practitioners and employees working for Holacratic organizations. The questionnaires assessed the impact of specific components of Holacracy on social sustainability. This phase was guided by sustainability science thinking. The aim was to elucidate any causal link between Holacracy and social sustainability thus facilitating the understanding of organizations as contributors to sustainable development. The reasoning behind selecting a survey for the main source of data collection, was to capture a large enough sample size for meaningful analysis. The population, the researchers aimed to reach, was any Holacracy practitioner or employee working in a business that utilizes Holacracy as their organizational structure. The main contacts of the study were in Canada and the UK, but their networks spread throughout North America and Europe.

Once Holacracy's ability to contribute to influencing sustainability in the context of the larger socio-economic system was understood, primary research methods were framed to test the researchers' understanding. Survey questions were created that looked at how the elements of Holacracy influence the core aspects of social sustainability. To ensure that social sustainability was communicated most effectively and was appropriate to the specific context, the researchers tested three different theories, which each sought to define the elements that contribute to a healthy social system. Further explanation of these theories in relation to each other can be found in the Conceptual Framework Development section.

The elements of social sustainability and Holacracy, discussed in Conceptual Framework Development section, were established as the key working concepts that were used in the questionnaire. They were chosen through an iterative process over three weeks as the researchers tested different ways of communicating core concepts with the aim of answering the research question. Pilot questionnaires were formulated with several variables being tested each time, including the wording, length, order and type (i.e., statement, list, multiple choice, Likert Scale, etc.) of questions being asked (Denscombe 2007). The pilot questionnaires were all sent to five to ten people from whom the researchers received and incorporated feedback for the next iteration. These people were all currently conducting their own sustainability science research at the Masters or Ph.D. level. The aim of the pilot questionnaires, was to identify and revise unsatisfactory design features, so as to create a clear, complete and ethical final questionnaire that would elicit valid data and generate a high response rate.

As a result of these pilot surveys, the researchers arrived at a final research instrument in the form of a questionnaire with a mix of close-ended and open-ended questions. The questions asked about the four elements of Holacracy—Evolving Governance, Distributed Leadership, Decision-Making Authority and Working with a Purpose. The question associated with each element was used as a heading, under which the five elements of adaptive capacity—diversity, learning, self-organization, common meaning and trust were listed as sub-questions related to that heading. There are four headings, with five questions each totaling twenty questions overall (see Appendix A for example). These twenty ordinal questions were posed to all participants of the questionnaire.

Open-ended Questions

For the practitioners, five main open-ended questions were provided to further develop their answers and to pull out some tangible examples of how each of the Holacratic elements affected one or more of the adaptive capacity elements. Four of the questions followed the same format, which was: ‘Please describe an experience when (insert Holacracy element) had an impact on the elements listed above.’ An additional concluding open-ended question was put in place to ask for any further thoughts which they may have around their experience with Holacracy. Out of the forty-one practitioners who participated, thirty (73%) of them completed the entire questionnaire, however, the number who answered the optional open-ended questions varied. As mentioned above, slightly different questionnaires were created for the two groups, the open-ended questions being the main difference, which practitioners had the opportunity to answer, but employees did not. The researchers did, however, provide one open-ended question for the employees to elaborate on any further thoughts they had with their overall experience with working with Holacracy. Out of the forty-seven employees who completed the questionnaire twenty-five (53%) completed the additional open-ended question.

Phase 4: Data Collection

Triangulation

A “mixed methods” approach to data collection was adopted, because of the determination that qualitative and quantitative approaches were the most effective way to answer the research question. After all of the questionnaire results were received, a further round of research was completed, in the form of five semi-structured interviews. These were done to triangulate the initial data and address validity concerns. The reason for deciding to do follow-up interviews was that the data from employees did not incorporate open-ended, which reflected a pragmatic design constraint due to the short amount of time employees had to complete the questionnaire. The interviews were therefore focused on employees who volunteered to participate. A selection of potential interviewees was further scoped by the desire to have a range of overall impressions of Holacracy, ranging from neutral to positive to very positive. Any employees who experienced Holacracy as negative did not offer their email for a further interview. These interviews served to further validate the data, by testing the preliminary understanding of these participants and encourage more elaborate and nuanced responses. Semi-structured interviews were chosen, because they allowed interviewees to express their perspectives on the topic and also generated data that could be compared across respondents (Savin-Baden and Major 2013). Questions in the interviews were designed to prompt specific examples of how certain Holacratic and adaptive capacity elements were experienced. It was then left to the research team to ascertain where the parts of each story tied to different AC elements and Holacratic components. The variation in respondent answers was of interest, because a question could be interpreted in a number of ways and the answers often related to multiple elements of adaptive capacity and its relationship to Holacracy components. These answers have been used to support and elaborate on trends identified within the quantitative data set.

Phase 5: Coding, Analysing and Interpreting Data

Coding of questionnaires

From the questionnaire, a large amount of ordinal data was received. Because questions in closed-ended part of the questionnaire were pre-coded, it made it easy for the researchers to

organize this data. The scale for all questions was 1 to 5. Table 2.4 shows how the points were allocated on this scale relative to responses to the closed-ended questions.

Table 2.4. Ordinal Data: Point Allocation

1	Significantly decrease	Very negative experience
2	Slight decrease	Somewhat negative experience
3	No effect	No effect
4	Slight increase	Somewhat positive experience
5	Significantly increase	Very positive experience

This allowed the researchers to tabulate the relative positive or negative experience of users of Holacracy. For ease of analysis, the overall rating of each Holacratic element on each adaptive capacity element was averaged for all respondents. All complete answers were counted even if a respondent did not answer all questions. To interpret the difference between the sample groups, the answers were separated by employees and practitioners. For this quantitative data, a Mann-Whitney-U test was used to determine the statistical significance of the difference in responses between the two sample groups.

To organize the qualitative, open-ended questions, a spreadsheet matrix was created that overlay AC elements with Holacracy components. A process was then undergone to categorize the responses into the respective codes.

In response to common themes that did not have predetermined codes, an allowance was made for the development of sub-codes. These could be any themes that were found to impact a user's experience of Holacracy.

Memo and coding of interviews

The interview recording process was done through specific questions that were used to inform gaps in the employee survey data. During the interviews, one person conducted the interview with at least one, sometimes two note takers. The interviews were recorded and listened to again with detailed notes taken. Interview notes then went through a similar process to the open-ended questionnaire responses, where the researchers determined what relationship quotes had to the specified codes and then organized them accordingly.

Analysis and Interpretation

With open-ended responses and interviews were coded into the same matrix, comparing the four Holacratic components to the five elements of adaptive capacity, the researchers could easily interpret the frequency of various codes. Having all the data coded and inserted into the relevant categories also helped to familiarize the researchers with what the data was saying.

The researchers interpreted whether the results of the open-ended questions and the interviews were deemed to be positive, neutral, or negative. This is recognized to be a subjective allocation of responses, however, the results lean themselves to be reasonably interpreted in this manner. For instance, a positive response could be concluded when a respondent said an element (i.e., trust) increased through Distributed Leadership. When responses were less clear, positing an element increased in some cases, but decreased in others, it was deemed neutral. A negative response was recorded when a respondent reported an element to decrease, go down, become worse, etc.

All the qualitative data, interviews and open-ended questions, were then used to provide substance and deeper understanding for what the numbers from the ordinal data was communicating.

Sampling

The sample included individuals that have official credentials as Holacracy practitioners and coaches, as well as people employed in organizations using Holacracy. The researchers reached out directly to 68 organizations that publicly shared that they are using Holacracy. To further expand the reach of the questionnaire, it was posted to online forums where many practitioners and members of the Holacracy community share knowledge about the structure. Furthermore, a Holacracy coach supported this research and used his connections to personally post the questionnaire through channels accessible only to the inner circle of Holacracy providers. The researchers waited for one week as responses came in and then followed up with any organizations or individuals who did not yet participate and sent them a reminder to solicit one more round of responses. In all, 122 respondents participated in the questionnaire, forty-one of which were certified practitioners, and eighty-one of which were employees working in an organization using Holacracy. Several respondents agreed to participate in a follow up interview to further explain their experience using Holacracy and expand upon the responses they provided in the questionnaire. Of those who agreed, five employees were chosen for interviews based on a range of how they expressed their overall experience with Holacracy.

Validity

To introduce the questionnaire, sufficient information was provided, so that participants knew what the subject was. Particular care was taken, however, when choosing the language, to ensure that the participants were not influenced by any biased implication of what was the right or wrong answer. Too much information, explaining how the results would be interpreted, could create a subconscious bias from the participants and lead them to answer questions in a particular way. It was important that all participants had the same understanding of the terms that were being used. To avoid the possibility of questions being interpreted in different ways, all key terms were defined on every page, so that respondents could always refer to the definitions if a concept was not clear. See appendix A for an example of the participants' view of the questionnaire, which shows how we asked questions about distributed leadership, a component of Holacracy.

The researchers acknowledge the participant sample group was limited in size and cannot represent the views of all Holacracy users. However, the outreach tactic mentioned in the above section was used, to include as many relevant voices as possible. This was done in an attempt to address the external validity concern of producing generalizable findings.

The researchers recognize that although informed measures were taken to ensure suitable indicators of the concepts were used, the frame in which they chose to apply the concepts was inherently imperfect (Denscombe 2007). For example, the use of AC to view social sustainability and the chosen components of Holacracy are incomplete from an epistemological view of knowledge production. This means that the results cannot be guaranteed to wholly represent the concepts.

Limitations

The questionnaire was limited by the fact that some responses did not have a further round of testing. The researchers aimed to solicit the largest response rate possible. This meant taking into consideration things that might discourage participation and adjusting the approach accordingly. For instance, during the piloting phase, feedback from two Holacracy practitioners suggested that employees would be less willing to complete a long survey. Furthermore, social research literature suggested the length of surveys to be a major deterrent to answering them (Denscombe 2007). In response to this concern, a branching function was designed in the questionnaire, so that when respondents self-identified as employees in organizations using Holacracy, they were diverted to a shorter version of the survey. Practitioners were routed to a longer more in-depth survey.

Related to the differentiation between sample groups, the researchers are aware that employees do not have as in-depth training in Holacracy as practitioners, thus, employees may not provide accurate responses to the questions regarding the specific components of Holacracy. A further limitation was the short amount of time available to complete this data collection. Some individuals that received the questionnaire said they would participate when they were less busy. Unfortunately, the data collection phase fell within strict time constraints in order for the researchers to move on to the analysis phase, resulting in the exclusion of these potential participants.

The method used to reach the most respondents as possible, was to post a link to the survey on message boards and request for employees to share the link throughout their companies. Because of this, there is not information on how many people received the survey versus how many people actually took the time to complete the survey.

Not all conversations are private, therefore, in the workplace there could be a level of self-selection happening when people choose which information to include or leave out. For instance, if a respondent is using a company computer or server to take the survey, there is a possibility that the information they provide will be accessible to others via digital surveillance programs. This knowledge could prevent participants from wanting to share sensitive information or negative views of their employer. There is no information to suggest that this was an issue for respondents.

The idea of employers and employees presents another possible limitation in how the research was framed. Questionnaire participants were asked to choose if they identified themselves as employees or practitioners. It was not until the results were received that the researchers learned that many holacratic organizations have done away with these labels due to their hierarchical roots. Instead, all members of a holacratic organization are often referred to as partners. This may have limited people's readiness to accept the questionnaire, using a frame that they did not necessarily resonate with. That being said, error did not seem to have a significant effect on responses because people understood the traditional dichotomy of employee-employer for the purposes of responding to the questionnaire.

Finally, the sector in which a holacratic organization operates could have an impact on how well it corresponds with the elements of AC. The researchers concede that testing for this variable could have uncovered some useful results, but did not include it within the scope of this study.

Assumptions and biases

From the outset of this study, members of the research team had various assumptions about the outcome. Some assumed that Holacracy would prove to be more positive in regards to adaptive capacity, whereas others felt the mechanical nature of the model, would lead to a less positive result in regards to social sustainability. All of the researchers felt that Holacracy would have some effect on the individual's experience within an organization, which may have led to a bias in the early stages of understanding how Holacracy impacts organizations. The research process began by having an informative conversation with a Holacracy coach, whose advice assisted in the development of this research. This advice could have influenced the way the research team viewed Holacracy's impact on individuals and formed a biased opinion around certain elements of the model. All of these assumptions may have influenced the researchers in their general interpretations of the results.

It was quickly identified that two distinct groups should be included in the questionnaire, practitioners and employees. There was an assumption that a noticeable difference would emerge in how these groups perceived the benefits of Holacracy. Specifically, it was assumed that practitioners would view it more favorably, because of having a vested interest in its successful implementation into their organization, or its development as an alternative organizational structure generally (i.e., HolacracyOne practitioners). The research team recognizes the potential influence this may have had on how they viewed the information and interpreted the results.

Another potential bias surfaced during the analysis process which may have also influenced the final results, where some of the open-ended questions didn't specify to which AC element they were referring. Therefore, this led the researchers having to identify appropriate headings in which to group the responses. This process, with the intention of being objective, was inevitably influenced by the bias of those doing the analysis.

Finally, the researchers acknowledge the lens through which they view this topic was limited to a Western perspective (Canada and The UK). This bias naturally would have influenced the researcher's interpretation of the data and the subject itself.

3 Results

The mixed methods approach used, led to three different types of results:

1. Quantitative Ordinal Data. Twenty questions—formed the majority of results. Each question was completed by at least seventy-two and up to seventy-eight total respondents including practitioners and employees.
2. Qualitative Open-ended.
 - a. Five questions—used to provide more in-depth examples to support quantitative responses of practitioners only. Between twenty-three and eleven responses per question out of twenty-five practitioners who completed the entire questionnaire.
 - b. One overall impression question—used to gain insight from employees. Twenty responses out of forty-seven employees who completed the entire questionnaire.
3. Qualitative Semi-Structured Interviews. Used to triangulate quantitative responses of employees. Five interviews total.

The data will be addressed in turn, first by looking at the main difference between how the two sample groups experienced AC in relation to Holacracy and then to explore how all the aggregate data answers the research question of how Holacracy contributes to Social Sustainability. To explore the initial differences between the sample groups, the researchers used primarily the quantitative data, whereas for the research question, all data from all methods and combined from both sample groups was used.

The questionnaire had 122 total respondents from forty-five organizations, all of which exist in North America and Europe. This means 122 people opened the questionnaire on their computer and answered at least one question.³ Out of this group, eighty-one (66%) respondents self-identified as “employees working for an organization using Holacracy.” From this group of eighty-one employees, forty-seven completed the questionnaire (58% of the group). Alternatively, forty-one (33.6%) respondents self-identified as practitioners. Practitioners is the overarching title of the group which includes: certified Holacracy facilitators, coaches, master coaches, agents and providers. From this group of forty-one practitioners, thirty completed the majority of the questionnaire and twenty-five (61%) fully completed it. Of the entire group of respondents, seventy-two people (59%) completed the whole questionnaire.

The questions posed to the two groups differed slightly, as discussed in the limitations section. The main difference between the groups was that the practitioners were given more room to elaborate with explanations and open-ended responses, however apart from this exception, most the questions were the same for the two groups. The answers to questions posed to both groups comprise the quantitative results section, which encompasses the majority of the total primary data. This distinction between the two sample groups and their associated responses

³ It is difficult to know how many people actually saw the questionnaire in their inbox and decided not to participate. This is because we used several online community boards and asked the Holacracy community of practice to share the link among their peers. Therefore, the overall response rate is uncertain. If we were to do this again, we would have paid for the premium Survey Monkey account where we could track who saw the questionnaire.

forms the basis for comparison. This offers insight regarding the difference in how the two groups experience elements of adaptive capacity in relation to Holacracy.

3.1 Exploring the Difference Between the Experiences of Employees and Practitioners

Table 3.1 shows the data organized by questions about the four components of Holacracy-Evolving Governance, Distributed Leadership, Decision-Making Authority and Working with a Purpose. The question associated with each component is used as a heading, under which the five elements of adaptive capacity—diversity, learning, self-organization, common meaning and trust are listed as sub-questions related to that heading. There are four headings, with five questions each totaling twenty questions overall. The numbers denote the total average responses from both employees and practitioners for each variable the researchers tested for in the questionnaire. The bold numbers below show the difference between the average responses of both sample groups. The scale ranges from 1-5, one indicating a significant decrease or very negative experience, two is a slight decrease or somewhat negative response, three is no effect, four is a slight increase or somewhat positive experience, and five is a significant increase or very positive experience.

Table 3.1. Difference in Closed-ended Responses for Both Sample Groups (expressed as an average from 1-5; Emp: employees; Prac: practitioners; N: total respondents)

	Evolving Governance		Distributed Leadership		Decision-Making Authority		Working with a Purpose	
	Emp (N=47)	Prac (N=31)	Emp (N=47)	Prac (N=27)	Emp (N=47)	Prac (N=26)	Emp (N=47)	Prac (N=25)
Diversity	3.66	3.87	3.19	3.96	3.66	3.92	3.49	4
	0.21		0.77		0.26		0.51	
Learning	3.85	4.48	4.21	4.48	3.98	4.27	3.74	4.24
	0.63		0.27		0.29		0.5	
Self-Organization	4.23	4.55	4.36	4.59	4.38	4.45	3.98	4.56
	0.32		0.23		0.07		0.58	
Common Meaning	3.74	4.19	3.74	3.04	3.60	4.04	3.94	4.64
	0.45		0.7		0.44		0.7	
Trust	3.74	4.17	3.85	4.37	3.74	4.27	3.83	4.28
	0.43		0.52		0.53		0.45	

As shown in Table 3.1, on average, practitioners experienced all of the AC elements more positively than employees. It was found that 81.5% of total responses from practitioners were positive, or an increase was experienced, compared with 68% of employees. 5.5% of total responses from employees were negative, or a decrease was experienced, whereas only 3.1% of total responses by practitioners experienced anything negative. Each AC element was experienced differently by the two sample groups, resulting in some interesting data as regards the research question. The following sections explore the results relevant to these differences in more detail by AC element.

Diversity

The average overall rating of Holacracy's impact on diversity was rated as 3.5 for employees, the lowest overall score for any element of AC, indicating responses between no effect and a slight increase or somewhat positive experience. The distribution of responses across the Holacratic components for employees was fairly even with the exception of its relation to Distributed Leadership (3.19), which was the least positively experienced relationship of all variables tested for in the questionnaire. Practitioners rated their experience of diversity to be 3.94 as the total average of responses in relation to all components of Holacracy. This is also the lowest average of all AC elements experienced by practitioners. The distribution of practitioner's responses was fairly even across the components of Holacracy. The total average difference between the groups is 0.44, about half a point on the scale of 1-5, or 8%. This difference indicates that practitioners view Holacracy as having a more positive impact on diversity than employees.

Learning

The element of learning was experienced quite positively by both employees and practitioners. Employees rated their experience of learning as 3.95 as a total average of responses in relation to all elements of Holacracy, which indicates a slight increase or somewhat positive experience overall. Learning was experienced more positively by employees in relation to the element of Distributed Leadership than any other element, with an average response of 4.2. Practitioners rated their experience of learning as 4.37 as a total average of responses in relation to all elements of Holacracy, which indicates responses between a slight and significant increase or positive to very positive experience overall. The total average difference between these two groups is 0.42, just under half a point on the scale of 1-5, or about 8%. This shows that practitioners interpreted learning to be experienced more favorably than employees, a trend observed consistently among the data.

Self-Organization

Self-organization was experienced as by far the most positive element by the practitioners and the employees. Employees rated their experience of self-organization as 4.24 as the total average of responses in relation to all components of Holacracy, indicating a slight increase or somewhat positive experience. It is worth noting that self-organization was experienced far less positively (3.98) in relation to Working with a Purpose for employees than all other components of Holacracy. Practitioners rated their experience of self-organization as 4.54 as the total average of responses in relation to all components of Holacracy. The distribution of the ratings is quite even between all elements, signaling a very positive experience or a significant increase in self-organization in every instance for practitioners. The total difference between these two groups is 0.3 or 6%, which is relatively minimal, but continues to reinforce the trend of practitioners having a generally more positive view of Holacracy.

Common Meaning

Common meaning was experienced positively overall by both groups. Employees rated their experience of common meaning as 3.75 as a total average of all responses in relation to all components of Holacracy, which indicates a slight increase or somewhat positive experience, albeit closer to no effect (3), than a very positive experience (5). The distribution of average employee responses in relation to the different components of Holacracy was fairly even. Practitioners rated their experience of common meaning as 3.98 as a total average of responses in relation to all components of Holacracy, which indicates a slight increase or somewhat positive experience overall. The total average difference between the groups is 0.23 on the

scale of 1-5 or just under 5%. This difference is relatively small between the groups, but still indicates a slightly more positive experience by practitioners. Unlike the employee responses, the distribution of responses from practitioners in relation to the elements of Holacracy was not even. For instance, in relation to Distributed Leadership, the average response to common meaning was 3.04 or no effect. Whereas in relation to the element of Working with a Purpose, the average response was 4.64, which was the highest average response for both groups in all categories. This indicates that practitioners experienced common meaning very positively, or to significantly increase in relation to Working with a Purpose. When testing the two variables together, the overall findings remain consistent, although less so as reported by employees.

Trust

Impressions of Holacracy's impact on trust was found to be on average positive in both groups. Employees and practitioners average rating across Holacracy components was between 3.79 and 4.27 respectively, indicating a slight increase or somewhat positive experience for both groups, but with more consistently positive responses from practitioners. The distribution of answers for both groups was consistent across all Holacratic components. With a difference of 0.48, there is a gap of almost 10% between the sample groups. This difference is consistent with the overall positive perception of Holacracy from the perspective of practitioners.

Testing for Significance

Out of this data, the researchers found that there were observed differences between the experience of the two sampling groups, with practitioners consistently rating their experience of Holacracy elements higher than employees. To test if this observed difference was statistically significant, the researchers conducted the Mann-Whitney U test, suggested by Denscombe (2007) to be the appropriate type of descriptive statistics for ordinal data (see Appendix C for details and an example of the Mann-Whitney U test). The test was conducted on the two data sets for each question, twenty times in total. When comparing the answers to the same questions from the point of view of both the practitioners and the employees, there was no statistically significant correlation between how the two groups answered the same question. If the p -value is less than the significance level (e.g., $p < 0.05$), then an investigator may conclude that the observed effect actually reflects the characteristics of the population rather than just sampling error. Investigators may then report that the result attains statistical significance, thereby rejecting the null hypothesis. In this case, the null hypothesis was not rejected (denoted in inferential statistics as, H_0) and therefore, there is no proven relationship between the measured phenomena.

The example in Appendix C, along with all other results from the U-test shows a p -value greater than 0.05. The p -value demonstrates how closely the variables are connected, it does not demonstrate the likelihood of any apparent connection between the two variables being real. Indeed, there is an observed difference among the two groups. However, it cannot be said with confidence that if the questionnaire was repeated with a larger or different sample group, that the results would be the same. Even though the U-test did not show a statistically significant difference, there is a consistently observed difference between the sample groups. Generally, practitioners had a more favorable view of Holacracy than employees, which was expected because they have more of a vested interest in implementing Holacracy successfully into organizations. This finding is important to note from the analysis, because the distinction of whether a person is an employee or a practitioner, has been found to make a difference on the influence that Holacracy has on their personal experience of adaptive capacity. More

specifically, self-organization came up as being most positive in relation to all elements of Holacracy, particularly in the open-ended responses.

3.2 How does the organizational structure of Holacracy contribute to social sustainability?

Table 3.2 shows the data organized in the same way as table 3.1, and here the averages of both sample groups are combined to form the total average responses of all participants of the quantitative portion of the questionnaire.

Table 3.2. Aggregate Closed-ended Responses (expressed as an average from 1-5; N: total respondents)

	Evolving Governance (N=78)	Distributed Leadership (N=74)	Decision-Making Authority (N=73)	Working With a Purpose (N=72)	Total
Diversity	3.76	3.57	3.79	3.75	3.72
Learning	4.16	4.35	4.13	3.99	4.16
Self Organization	4.39	4.48	4.46	4.27	4.4
Common Meaning	3.96	3.39	3.82	4.2	3.84
Trust	3.95	4.11	4.01	4.06	4.03

Diversity

Diversity received the lowest scores on average, out of all five AC elements. As table 3.2 shows, it received a total average of only 3.72, which indicates that a number of people have experienced no effect on diversity. In the open-ended questions, diversity was the element that was least responded to. Only six practitioners wrote something about it, where three of which were negative, two positive and one neutral. One respondent came with an interesting comment, which may explain the lower reception to it: “For diversity, it is somewhat negative, because Holacracy basically creates a 'digestive tract' for an organization. If times are really busy, because of honouring distributed leadership, it can be really easy for role-fillers to be insular rather than promote diversity in working through their projects. Though this typically happens in the busiest times, it is still part of the requisite culture that Holacracy brings” (Respondent 8 2016). Diversity did, however, receive the highest rating regarding Decision-Making Authority, which is shown in both table 3.2 and in the qualitative data. One participant wrote that because of Holacracy’s decision-making policy, “we are more open to asking others advice or opinions on any situation which may require it, instead of hiding things and trying to do them in secret... more ideas shared and more solutions found!” (Respondent 15 2016). During the interviews, diversity was again very infrequently mentioned with no responses at all to how it affects Working with a Purpose. The Holacracy element that received the most responses in regards to diversity, was Distributed Leadership, for instance, an interviewee positively expressed that it “Feels really good to find such a clear structure that allows us to express the best parts of our management selves” (Interviewee 2 2016).

Learning

Learning was experienced quite positively overall from both groups. As seen from the total in Table 3.2, it received 4.16 as an average score, indicating it is experienced somewhat positively overall, or it is slightly increased in relation to all components of Holacracy by both sample groups. A noteworthy exception is that 45% of employees said it has no effect in relation to Working with a Purpose. Learning had the highest positive correlation with Distributed Leadership over all other components of Holacracy as experienced by both groups. One respondent to the open-ended questions, gave a possible explanation for this positive relationship, saying “by being invited to step up and lead your role you naturally become more innovative and you research and consult to find solutions. It really increased [sic] your learning” (Respondent 25 2016). A similar positive sentiment is shared by twelve respondents out of a total of sixteen who mentioned learning in the open-ended portion of the questionnaire. Evolving Governance is the second most positively experienced component of Holacracy in relation to learning. For instance, a quote from an employee we interviewed which captures this well is, “[t]here have been quite a few people that have started off curiously looking at other roles and then jumped ship to other departments entirely, because it just fit better with their personality. People just don’t know sometimes, what they studied in university is not actually what their passion is and they didn’t know until they were exposed to it” (Interviewee 3 2016).

Self-Organization

Self-organization was by far considered to be the AC element that all four components of Holacracy had the most effect upon. It received the highest total average of 4.4, indicating that it was experienced as somewhat to very positive or having a slight to significant increase. Out of all four of the Holacracy components, Distributed Leadership was the most influential, receiving an average of 4.48, which was followed closely behind by Decision Making Authority which received 4.46. This was reiterated in the open-ended questions, where fifteen respondents commented on Distributed Leadership’s effect on self-organization, with twelve of these being positive. One of these saying that “we have a much higher percentage of workers engaging in higher level work and leadership than we did before embarking on our Holacracy journey” (Respondent 23 2016). And another stating that “it has really benefitted us to not have to include every person in every decision and, instead, practicing trust of colleagues in their roles” (Respondent 8 2016). This latter statement, although clearly in response to Distributed Leadership, touches positively on the other AC element of trust. This positive reception was reinforced by the fact that self-organization received virtually no responses of decreasing, or significantly decreasing, in relation to all components of Holacracy. The one Holacracy component that didn’t score so well in regards to self-organization was, Working with a Purpose. On this, one of the answers to the open-ended questions read, “I feel like Holacracy can be a very positive and powerful organizational structure - but you need to invest in the practice to see those benefits. Otherwise, people start to feel lost and a bit confused” (Respondent 17 2016). In all of the data sets, self-organization is still regarded as the AC element that is most positively affected or increased by Holacracy.

Common Meaning

Common meaning was experienced more modestly by both groups relative to the other aspects of adaptive capacity (with the exception of diversity), with a total average of 3.84. This indicates that common meaning was experienced somewhat positively or slightly increased in relation to all components of Holacracy. The exception to this trend reflects the results in the previous section, where in relation to Working with a Purpose, common meaning received a

total average of 4.2. The total average is increased, because of how positively the group of practitioners reported their experience of these variables. For example, in the open-ended questions, common meaning was mentioned by far the most in relation to Working with a Purpose and with a positive connotation in all instances but one. This is likely because there is a noted similarity between the two terms, in fact, they can be thought of interchangeably. For instance, the researchers' definition of common meaning was "human's desire to work towards a purpose and express themselves individually and as a group." Working with a Purpose is a precursor to organizations using Holacracy, and is meant to be shared amongst all members of the organization. An example of this is shown in the following response to the open-ended question regarding working with a purpose: "When working with a Purpose or in fact for a Purpose, there is a guiding star, something we are working for, not someone. Since that purpose is what we ALL work towards, we have [sic] are all pushing or pulling in the same direction" (Respondent 11 2016). In total, common meaning was referred to seventeen times, fourteen of which were positive and six of those were in reference to working with a purpose. This is consistent with the findings from the quantitative data, which shows Working with a Purpose to have the most significant positive impact on common meaning, especially as experienced by practitioners, who are also the group surveyed in the open-ended questions. Common meaning was seldom referred to during interviews, only four times, three of which were negative. Since employees were interviewed for triangulation, this is consistent with our previous findings which show employees not to experience common meaning particularly highly.

Trust

In the questionnaire results, trust received the third most positive response overall, with a 4.03 rating. The highest rated Holacracy element was Distributed Leadership with 4.11 and the lowest was Evolving Governance with 3.95. Through the open-ended questions in the questionnaire, trust was mentioned seventeen times with fourteen responses determined as positive, two as neutral and one negative. Trust was mentioned most often regarding Distributed Leadership and Evolving Governance, but there is usually more to the story. The researchers recognize the difficulty, in some cases, of placing an answer in categories based on positive, neutral, or negative experiences. For instance, one respondent reflected on the varying degree in which trust can be influenced in Holacracy in response to different scenarios an organization can face.

"In the past few months our organization was faced with a huge challenge. As a result of that challenge all facets of the organization were under strain. Trust eroded, etc. However, I feel that if we were not using Holacracy our organization might have completely splintered and fallen apart. It was Holacracy that provided us with enough trust and stability to weather this huge storm" (Respondent 46 2016).

Trust came up nine times in our interview process with 6 mentions that relate to Distributed Leadership, four of those being positive and two being negative. In some cases, interviewees who saw the trust being decreased, associated this with the initial implementation stages of the model. As one respondent states, "trust went down during the early implementation phases because of lost of [sic] control over positions - insecurity around jobs. It has been seen however, as the time goes on, and the organization becomes more comfortable with the model, trust is rebuilt and sustained" (Interviewee 1 2016).

An employee of a company that has been using Holacracy for two years experienced challenges related to the implementation of the new structure. They found that when jobs were codified

and delineated into roles, people perceived this to be a sign they were planning to downsize some positions and felt threatened. “This led to people grabbing roles from other people, or modifying the roles of other people to diminish them and make theirs look more important” (Interviewee 5, 2016). This situation was linked to Evolving Governance, because it was the changing nature of roles that led to a sense of instability and panic among employees.

Sub-Codes

Through the research process, certain themes arose in the open-ended and interviews that have an overarching impact on how Holacracy is experienced. In order to account for these impacts, sub-codes were created to contain and organize this information.

Implementation

How Holacracy is brought into an organization has shown to have significant impacts on individuals’ experience of Holacracy. Some organizations have taken a more organic procedure to implementing, by reading Brian Robertson’s book and doing their own research, and then bringing some components on board. This was the situation for one company whose Executive Director says that they were already using similar ideas of self-organization and Distributed Leadership, but Holacracy put a name and deeper understanding layered on top of the practice they were already doing.

In other cases, implementation has been a painful process, with varying levels of commitment from people in the same team. In a case where an educational institute has been implementing the structure, there was some pushback and questioning of why they should undertake this transformation. This pain was described as coming from the need to separate the role that a person holds from their personality, this touches on the ego and can be a sensitive topic for some people.

The researchers have found that implementation has an effect on all areas of Holacracy and the experience of adaptive capacity elements. As evidenced in this quote, the consistency and commitment to the practice of Holacracy has a wide range of effects on an organization.

“Our main experience with Holacracy has been that it is more of a starting place than a solution. We were attracted to the clarity, transparency, and adaptability built in to Holacracy. But our implementation has pushed back on us the importance of vertical development, communication, and other interpersonal work. Holacracy doesn't solve much in and of itself. But it does a great job of surfacing things that are great growth opportunities, both personally and collectively” (Respondent 23 2016).

In another situation from an IT company that has really embraced Holacracy, the differences in experience are apparent from employee responses. “In the company, Holacracy is used, and seems to be working well. Some projects use it, others don’t” (Respondent 32 2016). This quote shows the incomplete implementation that some companies have chosen to take. Another employee from the same company shares this about implementation: “the results highly depend of how well is Holacracy implemented. At [our company] I believe we are not doing very well yet, but it has good potential” (Respondent 37 2016). These opinions are interesting, because of the variation between experiences within the same company, as a result of how Holacracy is implemented.

Role-ationship vs. Relationship

This was articulated in early conversations had with Holacracy practitioners as the emergence of *role-ationships* replacing *relationships* in the workplace. This dichotomy was subsequently mentioned in an interview with an employee at a company in the United States and was experienced particularly during the implementation phase of Holacracy. When people are working from the role they are assigned, they must think in terms of that role when relating to other co-workers. For this company and others, this has been a gap in practice in need of being addressed. One strategy has been to implement a well-defined ‘tribe-space,’ which is a space created for people to talk about their personal issues and not be constrained by the Holacratic rules. Another company shared, that any time outside of governance and tactical meetings is tribe space. This company also shared that they have made a conscious effort to communicate what role they are speaking from when communicating – either by email or in person.

Leadership

In contrast to Holacracy’s move away from the hierarchy, there remains the requirement for a top-down decision to be made to take on the challenge of implementing the new structure into a company. From the results, examples were found of a “courageous leader” (Interviewee 1, 2016) taking on the challenge of introducing Holacracy to a company. In one case, the interviewee expressed that they were certain that they would have given up on Holacracy four months into the process if it was not for the efforts of their leader to push through the tough spots. This experience is from an organization that undertook the formal adoption of the constitution and received direct coaching from HolacracyOne. The feeling was that not enough people saw the value of what they were doing to want to continue pushing through the pain (Interviewee 4 2016). In another case, with a relatively small consultancy company, it is the owner of the company who is also the main expert on Holacracy. From an interview with one of their partners, the knowledge of the owner is key to relaying how Holacracy should be functioning and then guiding the company to proper execution.

Organization Size

The number of people in an organization arose as an important consideration through the interviews with employees. The aim of asking a question about this was to understand whether Holacracy is more suited for a larger or a smaller group of people. For one organization that is a large conglomerate of five subsidiary companies, the interviewee’s only concern with size was the logistics of getting people trained in Holacracy. An employee interviewed from a tech company that is expanding rapidly and now operating in 5 different countries, shared that as the firm has grown they have invested more in Holacracy training and development because it has proven to be able to handle the rapid growth they are experiencing. According to this interviewee’s account, Holacracy has been especially effective with remote working, keeping him and his project manager connected and updated on a daily basis. For an example of a smaller company using Holacracy, a partner from a small consultancy was interviewed. Their perception was that Holacracy confused things by back piling numerous roles onto a single person. Although these three anecdotes do not provide a significant number for analysis it is of interest and would be a consideration in further research.

4 Discussion

In this section, the findings from the research will be discussed in turn, starting with an overview of key discussion points, then exploring the differences experienced by the sample groups, and lastly to the RQ. The difference experienced by the sample groups will be discussed generally, highlighting noteworthy results, but will not speak to each AC element in detail. The research question will then be addressed, specifically outlining how each AC element was experienced and discussing what the findings mean regarding how the Holacratic structure contributes to adaptive capacity.

Overview of the Field

As Holacracy is an emerging organizational structure, there is still much work to be done on developing its practice. Although the structure was field tested by Brian Robertson in his software company for a number of years before its debut to the world, it is only now receiving true experimentation across a wide range of sectors. With the lens of Social Sustainability and subsequently adaptive capacity elements, this study has been able to build a detailed understanding of the experiences of people using Holacracy on a daily basis. On a whole, Holacracy has shown that it does make a positive impact on the five elements of adaptive capacity, to varying degrees of success. The how and why of the relationship between Holacratic components and adaptive capacity elements was elucidated through the interviews and open-ended questions. In a number of cases, although there was a painful implementation period, people working in organizations using Holacracy see its benefit in many ways. With the stand-out impact on self-organization, examples of experiences find that people enjoy having the flexibility and efficiency that comes along with Distributed Leadership, Decision Making Authority and Evolving Governance.

This study's aim was not catered directly at improving the implementation of Holacracy, but the results do show where gaps exist. Brian Robertson's book provides many of the essentials for organizations to begin with Holacracy and there has been evidence of success through a self-taught approach to implementation (Interviewee 2 2016). The results of this study would ideally inform practitioners and coaches – HolacracyOne and others – on the shortcomings and strongpoints of the identified Holacracy components. The efforts of the researchers have been focused on elucidating the direct linkages between these components and the lived experience – through the lens of adaptive capacity – of employees and practitioners of Holacracy. With this method, a clearer understanding has been built of how the implementation and practice of Holacracy can be achieved.

Sub-codes

Implementation

Implementation of Holacracy quickly arose as an important topic in the data. Through the quantitative open-ended questions and the interviews, it arose in one form or another more than 25 times. The range of why it was mentioned varied from problems of implementation to not full implementation to successes in the process. Again, because Holacracy is a relatively novel organizational structure, there are many lessons around how implementation could be done

better. The examples where Holacracy is running smoothly show some commonalities. The IT company with 20+ respondents to our survey had a few good examples. They use a bonus structure that enforces the consideration of the purpose of the company and the circles. They also provide a 2-3 hour 'onboarding' session to new employees and then access to paid training for anyone interested in learning more about how Holacracy functions. Taking this proactive approach evidently pays off, the company is growing rapidly and is investing more into the maintenance of Holacracy.

An example found about the pain experienced during implementation was an educational institute that is about 7 months into implementation. The employee interviewed expressed that there was a lot of discomfort at first but cautioned against the attempt to explain the 'why' behind Holacracy too early, reasoning that the 'why' will emerge and be different for each person's experience. This was an interesting attitude to take and worth noting.

Role-ationship vs. relationship

The transition from relating to people on an individual, personal level to a strict role-based level was found through the data to be a challenge. Some respondents did not at first understand the benefits of the shift which caused tension in the group. What did come out from the positive experiences was the thought that having to disconnect from the person to the role, removed a level of politics from getting things done. People could speak very directly to what they need from the well-defined and specified role assigned to certain accountabilities. Techniques for facilitating the smooth resolution of this tension included the use of 'tribe-space' – where roles are not considered and people speak on a personal level – along with clearing stating while communicating in emails and in person, what role you are speaking to and what role you are speaking from. Taking these elements into consideration is something that HolacracyOne advises and this research can validate as being effective.

Leadership

The theme of 'courageous leader' came up a number of times through the questionnaire and interviews. The importance of an instigator of Holacracy cannot be underestimated. In the initial research, done on Holacracy the story of Zappos' CEO Tony Hsieh taking on the challenge of converting the largest company by far to run on Holacracy, demonstrates the element of top-down imposition that can come with implementation. This is not to say that it is essential, there may be cases of organizations taking it on through an agreement between partners, but the stories shared with us came through with the message that there was a leader that took charge in bringing Holacracy into use. This aspect of Holacracy's implementation is very important when considering making the change and having it stick. There needs to be someone taking the responsibility for proper implementation. According to HolacracyOne, Holacracy is meant to be done 'all or nothing,' and there are cases in the data that show this is for a reason. In this excerpt from an open-ended response, the impact on not taking charge on the practice had direct impacts.

"I have seen our organization put a lot of energy into practicing Holacracy well (in the beginning) - and when we invested energy into the practice, the benefits were tangible. People were excited and engaged...Right now, our organization is letting it's Holacracy practice slip. Not everyone in the company is engaged in the processes. Tactical and governance meetings aren't happening as frequently. The ones that do happen are often rote. Because of this, I see the levels of trust,

distributed decision making authority, clarity of purpose, communication and team morale suffering” (Respondent 17 2016).

In an ironic sense – given Holacracy’s move away from hierarchical structure – without a courageous leader directing the process, it can be seen that Holacracy can slip and not be effective as it could be, eventually impacting the base elements that keep an organization functioning.

Organization size

The influence of organization size came to light through the interview process, as the question in the questionnaire only asked for a simple answer of how many people work at the organization and did not go any deeper on the analysis. The range of impacts that did come up through the interviews showed the researchers that for small businesses, with under ten employees, having large numbers of roles per person resulted in a lot of confusion. This confusion may have led to inefficiencies and points to a setback of Holacracy. The IT company that has experienced significant growth with the use of Holacracy has found that it facilitates ease of working remotely and can be done well in a large company. These two varying experiences highlight the importance of organizational size especially in the distribution of roles.

4.1 Exploring the Difference Between the Experiences of Employees and Practitioners

Overall practitioners favored all elements of adaptive capacity more positively than employees. Each element, however, was experienced differently by the two sample groups, which provided interesting insight into the variables that were at play when answering the research question.

Both sample groups found diversity to be the least positively experienced element of AC. Of particular distinction is how employees experience diversity in relation to Distributed Leadership (3.19), which is the least positively experienced relationship of all variables tested in the questionnaire. A possible explanation for this trend, was expressed during an interview with an employee, when she explained how her co-worker energized more than twenty roles and found it challenging to communicate them all. This shows how distributed leadership can actually have the effect of decreasing diversity in a small organization. It is possible that as one person takes on more and more roles, the variety of ideas and responses to a changing environment could decline. This is due to the fact that several unique challenges are being dealt with by a single person with a naturally limited capacity to process large amounts of information. |

Self-organization was experienced as the most positive element by both groups. Although, it is worth noting that self-organization was experienced by employees less positively in relation to Working with a Purpose than the other components of Holacracy. The difference in how these groups experienced these variables together can be demonstrated by the variances between how a practitioner and an employee speak about them. For example, a practitioner said, “[w]e’re talking to roles now, instead of talking [sic] each other. This has clarified the relationships. The purpose of each role, circle or organization being clarified, as partners we know what we have to do and why and can step back from the personal image we have build [sic] on each of us and interact better for the sake of the entire organization. Coordination

obviously improved” (Respondent 15 2016). This positive interpretation can be juxtaposed against an interview response from an employee regarding the same subject, saying “...the separation of role and soul was experienced through the ‘forced’ use of Holacracy” (Interviewee 4 2016). This clear diversion in opinions could be attributed to the fact that practitioners are the ones who are helping to put Holacracy in place within an organization, while employees are left to deal with the consequences and left with little choice as how to behave beyond the constrictions of the role structure.

The element of Common Meaning further illustrates the difference in the way these groups experience Holacracy. When discussing this element in relation to Working with a Purpose, a practitioner stated, “We are a purpose driven organization; Holacracy has allowed us to go deeper into that purpose and also get ridiculously clear on how that purpose FULLY governs what we do” (Respondent 16 2016). This sentiment is viewed differently as a general trend by employees, one of whom reflected on the same two variables as follows: “Holacracy has significantly decreased from my organization's ability to move forward with a common purpose - it ends up being a bunch of individuals pursuing whatever it is they want to pursue with little consideration for the broader organization” (Respondent 41 2016). The researchers expected these two variables to score highly together across the sample groups, which was the case, but significantly less so for employees. This further demonstrates just how differently these two groups experience Holacracy. Impressions of Holacracy’s impact on trust was also significantly different by about 10%, which is consistent with the overall positive perception of Holacracy from the perspective of practitioners. An example of one practitioner’s overall impressions of Holacracy demonstrates this well: “...This system has allowed us to scale consciously and through trust. It has really benefitted us to not have to include every person in every decision and, instead, practicing trust of colleagues in their Roles and clarity of org structure” (Respondent 8 2016).

What this Means from a Social Sustainability Perspective

Knowledge of these differences could be of use for our intended audience of practitioners, particularly in pursuit of strategic sustainable development. For example, practitioners are making meaning for themselves by the act of implementing Holacracy as their vocation, but the same cannot necessarily be said for employees who may be more passively receiving the newly implemented structure. Implementation is an important thread running through the entirety of the results. The results suggest that to bring Holacracy into an organization effectively, practitioners could benefit from inviting others into the ‘why’ aspect of the transition process so that all members of an organization can make sense of the new structure together. Using common language and fostering shared mental models can help to create meaning for all individuals involved.

As an overall trend, there is an observed difference in average responses between the two groups as noted in the results. The average perception of AC elements, in relation to Holacracy components, was more positive for practitioners in nineteen instances out of twenty. This trend essentially shows that on average, practitioners view Holacracy more favorably than employees. More specifically, practitioners view Holacracy to contribute more positively to social sustainability than their counterparts, at least through the lens of AC. This is not particularly surprising from the view of the researchers, because of the obvious pro-Holacracy stance this group is likely to have from the outset. Employees, on the other hand, are generally taught Holacracy from a practitioner, who is imposing a new way of organizing and work on

a group. In ordinance with this, the results show that there is indeed an observed difference in how the two sample groups experience the elements of AC in relation to Holacracy. Holacracy is a business and like most businesses, there are proponents that have a vested interest in ensuring the sale of their product or service. In the case of HolacracyOne, their service seeks to adequately train people to successfully implement Holacracy into their organization. These trained people (identified as practitioners for the purposes of this research) hold an inherent favorable bias toward Holacracy, as they actively seek to implement it as an alternative to a different organizational model, which they likely view less favorably.

The researchers are confident that these results are representative of an existent difference between sample groups. This is due to the consistency of observed trends among the data. Moreover, validity concerns were mainly addressed through the triangulation techniques used as part of the mixed methods approach to this research. That is to say, trends observed in the quantitative data were reinforced by responses to the open-ended and interviews questions.

One credibility concern of the results emerged from response rates of practitioners, as more people responded, participants increasingly neglected to fully complete the questionnaire. There were four sets of questions (for each Holacracy component) consisting of five questions each (all AC elements). The number of responses (N) from practitioners for each section respectively was thirty-one, twenty-seven, twenty-six and twenty-five. Employees, on the other hand, had the same number of respondents for all questions (N=47). This consistent decline in participation from the practitioners could detract from the credibility of the overall data for this group, because the sample became less and less representative of the larger group as the questionnaire went on. It is not clear why this trend emerged from one group, but not the other. A possible explanation was that this group received a much longer version of the questionnaire. As such, it required more time and effort with the open-ended responses, which could generate fatigue or simply be too time-consuming during someone's busy work day. Still, the majority of respondents answered all the questions, so this minor validity concern did not diminish the richness of the overall data to a significant extent.

4.2 How does the organizational structure of Holacracy contribute to social sustainability?

Diversity

With diversity receiving the lowest score out of all the AC elements of 3.72, it begs the question of why this may be. The researchers posit that from the answers received by some respondents, this could be because the definition of diversity was not as well understood as other AC elements. One respondent answered the open-ended question about Distributed Leadership's impact on diversity by referring to their hiring of people from different social classes. This is understood as the person interpreting diversity as the more traditional definition, related to cultural, class, and age ranges of diversity. This is not the same definition that was built for the research. The definition provided for the research was as follows: a variety of ideas and responses to a changing environment. This misunderstanding was only noted once in the open-ended responses, but could point to a failing in the research design in not using well-understood language. An argument could be made that cultural, gender and ethnic diversity are precursors to achieving a variety of responses to a changing environment, but this study was not scoped to take these factors into account.

Diversity's role in social sustainability is essential in relation to complex adaptive systems—in this case an organization's—ability to be resilient in the face of change. In contrast to hierarchical systems, that rely on a chain of command and apex agents, the researchers expected that Holacracy would facilitate and increase this diversity, by allowing for more knowledge to be integrated into decisions. The process of decision-making in meetings, through integrative decision-making, allows for multiple voices to be brought into a decision, but perhaps this process was not spoken to directly enough for respondents to understand this meaning of diversity. It is also possible that even though Holacracy sets up the conditions for diversity to increase, people's perception of it actually increasing was not very high.

Learning

Learning was experienced positively overall for both groups in relation to Holacracy. A likely explanation was identified in interviews and open-ended questions where respondents spoke about having more autonomy to contribute to their organizations in ways that felt meaningful to them. Instead of a myopic set of responsibilities one must fulfill as prescribed by their job description, Holacracy has enabled people to be mobile in their roles, entering new domains—adopting accountabilities as they see fit, simultaneously shedding old roles that become less relevant over time. This ability to choose work that suits your skills and passions, seems to generate more individual ownership and pushes people to constantly learn and grow to more effectively fill their roles.

As individuals learn, they have the potential to develop a variety of different responses to a changing environment, a central attribute for a system to adapt over time. This ability for individuals to learn on their own is certainly positive from a social sustainability perspective, but it must be transferred to the organizational level, that is, the system itself must learn if it is to be resilient over time. When describing AC, Missimer et al. (2016a) argue that in human social systems institutional and social learning play an important role for the system as a whole to learn together. Though learning certainly appears to have increased generally when Holacracy is used, it is difficult to say if this learning has transferred to respective organizations at large. This is no surprise though because as Missimer et al. articulate, “though learning is a natural individual trait, the organizational learning literature comes to the conclusion that organizational or communal learning does not come naturally to us. To learn as a system we need to learn together” (2016b, 7). To ensure that it is possible for learning to emerge at the system level, there must be no barriers for individuals to learn together as a group. This ability to make sense of things together, is reflected in the research definition of common meaning; human's desire to work towards a purpose and express themselves individually and as a group. It can then be said that if the possibility exists for all members of a group to positively experience common meaning, then so too exists the possibility of the organization to learn—continuously responding to changing situations and environments. The researchers can infer that theoretically there are no structural obstacles to finding common meaning associated with the design of Holacracy. In this regard, Holacracy is not inherently unsustainable when it comes to the AC element of learning. To confirm this finding, the researchers would have to do a comprehensive sustainability principle analysis on the components of Holacracy, an undertaking which is outside the scope of this study.

The element of learning didn't score high in all instances, as was made clear by the large amount of respondents answering that it has no effect on working with a purpose. This is not problematic in any way; it is merely an observation that the lens chosen by the researchers to elicit feedback from Holacracy users about social sustainability did not demonstrate a strong relationship between all variables. A lack of correlation between variables such as these, does

not establish anything in particular about social sustainability, either positive or negative. It is more likely a function of the research design, which is inherently imperfect, but nonetheless provided a frame to establish a common language and mental model between the participants and researchers from which to view the topic.

Trust

Trust is at the heart of social sustainability as the glue that holds the social fabric together (Missimer et al. 2016a). In order for Holacracy to be successful as an organizational structure, trust must be bolstered and supported. Trust, on average was seen as being slightly increased relative to Holacratic components, with an overall score of 4.03, the third highest out of AC elements. This shows that people have seen a direct link between Holacracy and increasing trust. The experiences that have been shared about this link demonstrate the importance of the role aspect in Distributed Leadership. By having clear and well-understood accountabilities people have been able to let go of their impulse to micro-manage. This result is expected and well-received; it corroborates with Holacracy's original *raison d'être*, to access and utilize the skills, knowledge and talent from all employees in an organization. For this goal to be realized, trust is an essential element. This also matches with the findings of the quantitative data, with Distributed Leadership being rated at 4.11 – the highest of all the components related to trust.

The second highest ranking was received by Working with a Purpose, with 4.06. Meaning behind this ranking can be found in the experience of one practitioner who found that by elevating the purpose beyond the individual, it allows trust to be built around the understanding that all actors within an organization are working towards a common goal. Creating a purpose is a central tenant of Holacracy, and the research shows that trust can be increased by having a well explicated and widely understood purpose for each circle within an organization. Having this purpose has been shown to allow people to trust that their colleagues are working towards a well-understood and shared outcome. In one standout example, an employee working at an IT firm shared their strategy for helping people to work towards the purpose of the company. The company distributes a sum of money to their employees, that they can then choose to gift as a bonus to other employees that demonstrate the purpose of the company or their circle through their work. This innovative plan encourages and reinforces the company's purpose organically and also fosters trust among colleagues.

The importance of trust within the organizational context, relates to dealing with the inherent complexity of group dynamics. Work done by Meijboom (2008) identifies the need for individuals to trust one another to access the diverse range of abilities for an organization to react and respond to changing conditions. In relation to Holacracy, which attempts to bring out the abilities of all actors within, building trust allows an organization to function well with self-organization. Trust, in accordance to the FSSD, is an essential element for social sustainability to be achieved. Relative to the social capital that organizations need to function, "trust has been identified as the main variable" (Missimer 2015, 43). The results of this study have shown trust to have increased from the perspective of the majority of participants. So, for this subset of people, it may be said the social fabric within Holacratic organizations is being strengthened.

Self-Organization

"Self-organization is the life force of the world, thriving on the edge of chaos with just enough order to funnel its energy, but not so much as to slow down adaptation and learning" (Laloux 2014).

During the analysis of the data, the researchers became increasingly aware in how much self-organization was being mentioned through all the data sources. From early on, it was clear that all of the Holacracy components in focus, had a visible effect on the individual's experience of self-organization. This was found to be the same for both the sample groups. This was, \ expected from the researchers, as they had assumed from the 'flat' nature of Holacracy, and its shift away from a centralized power system, the ability for people to self-organize would increase. As discussed in the introduction, the issues highlighted regarding hierarchy were dominantly around its inflexibility and its top-down decision-making policy. As found in the literature, when addressing large-scale societal issues such as unsustainability, this model proved to be insufficient (Maturana et al. 1999). Holacracy and other alternative organizational models, were born out of some of these inadequacies, and one dominant element that they aimed to address was the ability for people to self-organize.

From the researcher's understanding of Holacracy, it was apparent that holacratic components, such as the distribution of power through 'Roles' and circle structures, were intended to inspire individual leadership and decision-making authority, which in their essence demand a certain level of self-organization. Robertson, when describing the source of Holacracy's name, explains that the 'hola-' derives from the term 'holarchy', which refers to a structure found in nature, which is both a self-contained unit (like a cell), whilst still being part of a wider whole (an organ) (Robertson 2015, 39). He states that "these holarchies simultaneously honor autonomy and enable self-organization" (Robertson 2015, 39) and that "this is the type of structure that Holacracy uses" (Robertson 2015, 39). From this, the researchers understood the integral nature of self-organization within Holacracy, therefore, the fact that it was repeatedly identified as the most positively affected AC element was to be expected.

The clear correlation between the component of Distributed Leadership and self-organization, came as no surprise to the researchers. This was because, in the literature, Robertson describes the distribution of power in Holacracy as being all about "organizing the work, not the people, it leaves quite a bit of freedom for people to self-organize around what roles they fill" (2015, 65). Throughout phase one, the researchers built an assumption that the movement Holacracy has taken away from a centralized power system, would result in more people being able to successfully self-organize. This was confirmed by all of the data. The results clearly confirm that Holacracy's constitutional distribution of power contribute to the individual's experience of self-organization. This information is potentially useful for the intended audience of Holacracy practitioners, as it confirms and highlights the model's clear strength in regards to adaptive capacity and organizational resilience.

Another relationship between Holacracy's Decision-Making Authority component and self-organization was also expected by the researchers. This was because, like Distributed Leadership, the ability to make decisions independently, is at the root of what defines self-organization. Romme (1999, 803) explains that self-organization, "involves the capacity to act autonomously" and on a collective level is about people being able to "negotiate, decide and act together" (ibid) whilst retaining autonomy. Also, as one of the participants of the questionnaire states when discussing Holacracy's Decision-Making Authority, "I'm not sure how to have self-organization without it" (Respondent 21 2016). Both the results that the researchers gained from the quantitative and the qualitative data spoke to this and that an essential part of achieving successful self-organization is by having a system that demands, or at least encourages, people to take responsibility for their own decision making. This the researchers found to be a challenging process, especially in an organization that has transitioned from a traditional hierarchal structure to a holacratic one. One practitioner, who

was the previous chief executive of the organization in question, stated that one of the most challenging parts of shifting to Holacracy, was “to convince people they have the ability to make decisions” (Respondent 13 2016). The researchers recognized a clear correlation between the process in which the new model was implemented and to what level of participation the whole organization had in this process.

As discussed in the overview of the field, the overarching theme of implementation had a large influence on how people experienced Holacracy and therefore its essential components. It is an important point to highlight in regards to decision-making and self-organization, as the results have shown that if the implementation process is done in a top-down directed way, and the employees have no shared vision of the big ‘whys’ behind it, then this can lead to people feeling “lost and a bit confused” (Respondent 17 2016). This, the researchers see as an important point for their intended audience because it could be possible that although decision-making authority is rated as one of the highest components in regards to self-organization, it could be further improved by paying special attention to the implementation process. By doing this, and recognizing the difficulties that people may have in transitioning from one power system to another, especially in regards to Decision-Making Authority, could foster further self-organization for the organization as a whole.

Holacracy’s constitutionally defined governance process with “its promise of a safe and practical way to distribute real power and therefore allow for self-organization” (Robertson 2015, 24) is confirmed by the data results showing Evolving Governance’s effect on self-organization, as having a slight increase upon or being somewhat positive (4.39 table 3.2). Although not as influential as the previous two components mentioned, Evolving Governance in its nature, encourages for a more self-organizing system. Robertson, when talking about Governance meetings, states that “they follow a strict process to ensure that everybody’s voice is heard and that no one can dominate decision-making” (Robertson 2015, 25). Within these meetings, anyone in the team can propose that new roles are made, or amended to meet the needs of their role and therefore the wider organization. These proposals are considered equally, regardless of who brings them to the agenda. From the data, the researchers can see that this non-rigid governance system can again invite the capacity for people to self-organize effectively. One practitioner states that Evolving Governance, or as they refer to it as “vertical growth”, “is essential to becoming a self-organizing, dynamically governed organization and that one is not possible without the other” (Respondent 23 2016). Whilst these are seemingly positive results, the researchers are again aware of the role that the implementation phase plays in regards to everyone in the organization experiencing the same level of self-organization. This again is an important point for the intended audience to be aware of, especially in regards to the new language that Holacracy demands people adopt throughout governance and tactical meetings. As one of the interviewees states, when introducing Holacracy to new employees “it can be challenging, because you need a retraining to understand how to speak” (Interviewee 4 2016). She goes on to describe it as “the epitome of jargon” (Ibid). This, the researchers recognize could inhibit everyone from within the organization experiencing the same level of self-organization. Even if the governance system demands equal participation, without the shared vision of the system from all agents involved, the ability to self-organize could be challenged by a lack of basic understanding.

This leads on nicely to the final Holacratic component of Working with a Purpose, which in regards to self-organization, scored the lowest at 4.27, meaning that it was experienced to have at least a slight increase on the AC element. This was interesting for the researchers, because even though the experience was still positive, the effect of the Holacratic component on self-

organization, was clearly experienced differently from the others. Looking at the qualitative data for support on this finding, there was little written on this relationship. The following quote did stand out as an important point.

“We're talking to roles now, instead of talking each other. This has clarified the relationships. The purpose of each role, circle or organization being clarified, as partners we know what we have to do and why and can step back from the personal image we have build on each of us and interact better for the sake of the entire organization. Coordination obviously improved” (Respondent 15 2016).

Seeing the stated importance of the purpose for all levels in Holacracy gives the impression that there is a high amount of value attributed to Working with a Purpose. Why it received a lower score than other components may just have to do with the interpretation of the question.

“Adaptive processes that relate to the capacity to tolerate and deal with change emerge out of the system's self-organization” (Folke 2006, 259). Folke's statement encapsulates the true importance of self-organization for achieving resilience in a system. From the results, it is clear that all four components of Holacracy have a significant effect on the ability for people to self-organize. With virtually no responses revealing a decrease or a negative effect, the researchers can be confident in saying that when responding to the primary research question, that Holacracy, at least in regards to the four components focused upon within this research, contributes significantly to the adaptive capacity element of self-organization and therefore to social sustainability.

Common Meaning

“From the point of view of social capital and keeping a society together, common meaning was the essential aspect identified” (Missimer 2015, 45).

As shown in results, common meaning was regarded less positively out of the four AC elements. It was interesting to find that it didn't have quite as big an impact as the researchers had expected. They had initially assumed that the horizontal power structure utilized in Holacracy would invite all agents within an organization to build, and therefore share, a common vision. The literature around Holacracy and alternative organizations emphasize the importance of achieving an organizational shared purpose, especially with power being decentralized, then the organizational purpose becomes the anchor that brings the whole team together. As Laloux states “A strong, shared culture is the glue that keeps empowered organizations from falling apart” (Laloux 2014). As mentioned already, the researchers identified that the experience of common meaning was significantly different for practitioners than it was for employees, therefore, the results discussed in the following paragraphs, although a combination of both sample groups, need to be considered with this in mind.

“Everything comes from the purpose: the structure, the work, etc. and each employee is aligned to it and work towards it” (Respondent 29 2016). This statement from a practitioner captures the large majority of the positive responses around common meaning and working with a purpose. As mentioned in the results, the close relationship of the language could be a key reason for this correlation. Purpose and common meaning, almost being synonymous to one another. The researchers expected this to be the case, mainly because as stated in the results, the description that they provided for common meaning, incorporated the words working ‘towards a purpose.’ This in itself may have been an influencing factor for the questionnaire

participants, however, the data from the open-ended questions clearly shows a strong connection between the Holacratic component and common meaning.

Working with a Purpose is an essential aspect of being a holacratic organization and is intended to be shared with everyone within the organization. Robertson (2015) frequently highlights the importance of an 'organizational shared purpose' and how the essential structures of the model all aid in supporting it. One example of this is when he describes the distributed power system, lifting "everyone out of the parent-child dynamic so deeply ingrained in our organizational culture, and into a functional relationship between autonomous, self-managing adults, each of whom has the power to lead his or her role in service of the organizations purpose" (Robertson 2015, 23). This focus on a core shared purpose clearly can be seen to affect people's experience of common meaning, especially in regards to prioritizing the organizational vision above all. As reiterated by a practitioner "having a common purpose, mission and clearly stated values proved instrumental in maintaining loyalty towards the organization" (Respondent 13 2016).

Again, the researchers recognize the role of the implementation process in achieving this positive response. If the whole organization is not invited into the conversations around the 'why' of Holacracy, they are then immediately disconnected from a key aspect of the organizational purpose. This was shown in various cases, one practitioner states that "during the first months with Holacracy some members of the team felt that the previously established depth of human relations was at risk" (Respondent 18 2016). This was because the mechanical nature of the meetings felt very challenging for the employees and therefore made them question the positive nature of the model. This in itself could be seen as an obstacle for those people's experience of common meaning. Although they had expected Working with a Purpose to come out strongest in relation to common meaning, the researchers had not expected this temporal aspect to have such an influence on all of the AC elements. When working with a purpose and considering common meaning, this process clearly makes sense and should be noted again as a significant finding for the intended audience to take forward.

Common meaning was experienced differently in regards to the other holacratic components. With Evolving Governance, there were mixed responses, with some participants explaining how Holacracy had built immediate levels of trust "through the deliberate and conscious alignment of every role and action to the organization's purpose" (Respondent 14 2016). Whereas some experienced the governance structure, at times, leaving people "feeling 'out of the loop'- or without a voice" (Respondent 17 2016). There seemed to be a lack of correlation between common meaning and Decision Making Authority and similarly, Distributed Leadership, which was interesting and an important point to highlight for the intended audience. Even when self-organization is successfully achieved, without a shared vision or common meaning, there is no anchoring system to bring all members back together. As Missimer states, "from the point of view of social capital and keeping society together, common meaning was the essential aspect identified" (Missimer 2015, 45).

This, relative to the research question shows that although common meaning isn't experienced as highly as other AC elements, the results still represent an overall experience of being somewhat positive or a slight increase. Therefore, the Holacracy components in focus do somewhat contribute to social sustainability and the individual's experience of adaptive capacity.

Holacracy and Strategic Sustainable Development

“Complex adaptive systems are inevitably characterized by uncertainty, change and surprise, which in turn require flexibility and adaptation in dealing with the system” (Missimer et al 2016a, 5).

The five elements of adaptive capacity, as discussed in the introduction, are recognized as the essential elements that build a healthy and resilient social system. In facing adverse, unpredictable environments, adaptive capacity in its essence, is what allows the system to change in order to meet the emerging needs. This ability to manage resilience is particularly relevant to the realm of organizations, where the need to adapt is paramount to ensuring the continued success of the organizational purpose (A.V. Lee et al. 2013; Kayes 2015). In regards to the FSSD, as clearly defined in the introduction, the AC elements are the basis in which the social sustainability principles were formed. The SSPs then provide an operationalized definition of social sustainability. They do this by providing boundaries in which humans must operate in order for the conditions to exist, which allow the opportunity to be socially sustainable. To be clear, if the principles are observed, it does not mean that all people will be healthy or influential, or competent etc. Rather, as Missimer et al. (2016b, 8) explain, “the principles are about whether or not power and norms imply obstacles for health, influence, competence, etc. The term ‘structural obstacles to ...’ is key to each principle.”

For the purpose of the study, the researchers made an informed decision to discuss contributions to social sustainability directly through the lens of adaptive capacity. The social sustainability principles are created in order to be applicable to diverse disciplines and general enough to unify across sectors. They work predominantly on a systems level, or as Missimer et.al state, the FSSD ‘approaches social sustainability from a social system’s perspective’ (2016b, 4), whereas the elements of adaptive capacity can work on both a systems and individual level. When discussing AC in relation to the definition of resilience, Missimer et.al state that “transformational change at smaller scales may enable adaptations and hence resilience at larger scales” (2016b, 5). This was the direction that the researchers took in addressing Holacracy’s impact on social sustainability.

The effects of Holacracy were examined in relation to the internal impacts on an organization with a note that these interactions have the potential to have an impact externally as well. By looking directly at how the components of Holacracy influenced the individual’s experience of AC, the researchers were able to explore how the experience at a smaller scale could contribute to the resilience of organizations as a sub-system nested within the wider social-system. It is important not only to view organizations in isolation, but to also identify the connections they have to the world around them. That is, to understand the dependencies the topic of Holacracy has on the larger systems in which it exists and the resulting inputs from the larger system to that topic. When decisions are made in an organization, those decisions will have ripple effects, positive or negative, on the larger systems in which it is embedded.

So, what does this say about the role of Holacracy in supporting the transition towards sustainability? Through the data, the strengths of individual Holacratic components in relation to AC elements are apparent. However, when stepping back to view the potential contributions that Holacracy has on the wider system and the structural obstacles that it helps remove, it is important to understand how an impact on adaptive capacity has an effect on the social sustainability principles. As emphasized throughout the research, Holacracy’s strongest impact on AC was the individual’s experience of self-organization, which through the SSP lens can,

in turn, be linked to removing structural obstacles to influence, competence and impartiality. Figure 4.1 shows a summarization of the relationship between all AC elements and SSPs. Figure 4.2 below then summarizes the average scores of the AC elements, so the reader can easily see the relative impact of Holacracy on the related SSPs.

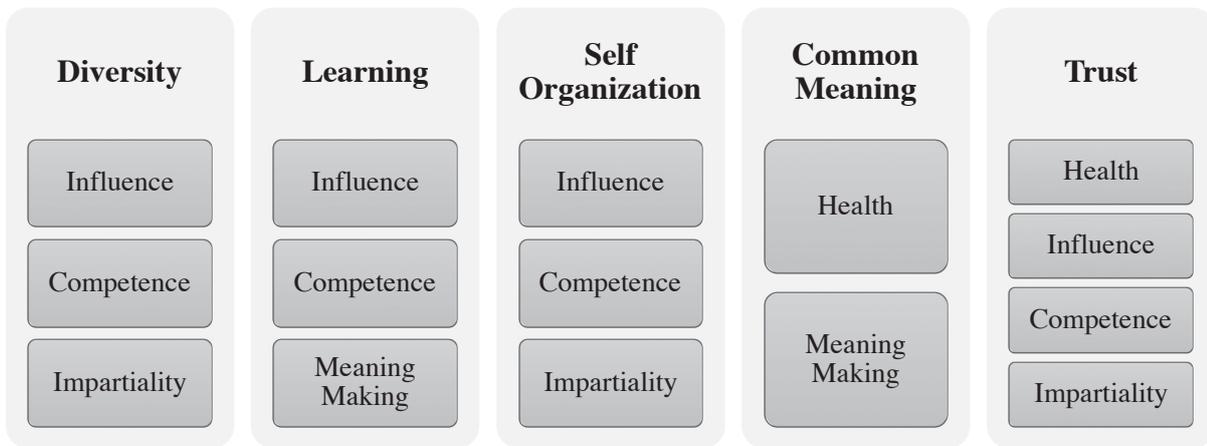


Figure 4.1. Social Sustainability Principles' relationship to AC elements



Figure 4.2. Average AC Element Scores (1-2 decreases, 3 – no effect, 4-5 increases)

Looking at the AC element of trust it is noted that it is directly linked to four social sustainability principles. As found throughout the data, all components of Holacracy had a significant positive impact on the experience of trust with Distributed Leadership and Working with a Purpose being the most impactful components. In order for Distributed Leadership to give power and agency through the role structure, there needs to be trust and underlying that trust is the influence that a role can have on their respective circle, competence in a person's ability to fulfil their role, impartiality as to what decisions they can make, and the health – mentally and physically – of the people fulfilling roles. So by looking at this one component of Holacracy that has positively influenced trust, the effects on the social sustainability principles, and the removal of structural obstacles to them, can be understood.

As Fig 4.2 shows, in all cases Holacracy was above the level of no effect in all cases. With some AC elements being more significant than others. When these findings are then extrapolated to the SSPs it is possible to see that Holacracy has an effect on the principles describing the structural obstacles that are the essence of the SSD's definition of social sustainability. With Holacracy being a factor in influencing organizations worldwide, the systematic impact of this alternative organizational structure is apparent.

An important consideration that the qualitative data showed, was the wide range of both positive and negative experiences in the ways in which Holacracy has been implemented. The researchers felt it was important to acknowledge this finding, as it is not only the model itself, but also the process in which it is implemented that can affect the individuals experience of adaptive capacity and therefore, could in this process, be creating structural obstacles in regards to the SSPs. Through the data, it can be argued that in these initial stages of implementation, if done in a top-down manner, then Holacracy has the possibility of creating a significant barrier to influence. In addition, it could also result in limiting competence and impartiality, due to imbalances in how individuals understand the structure.

4.3 Further Research

Given the current lack of peer reviewed research and literature surrounding Holacracy as an alternative organizational structure, several ideas and questions arose during the research process that were outside of the scope of the study. The researchers suggest the following would be valuable to address in further studies:

It would be worthwhile to view the implementation of Holacracy through the lens of developmental psychology. There have been indications that certain competencies such as high emotional intelligence or highly developed phases of human consciousness (Integral theory) are necessary to 'do' Holacracy well. This idea is contested to begin with, but there is some information suggesting that Holacracy works best for certain types of people, and less so for others. Those who are self-starters, highly motivated people that take initiative, who are very inspired to strive towards the evolutionary purpose of their organization seem to fit the mold of Holacracy well. On the other hand, certain people prefer to go to work, follow clear instructions from a manager, and collect their pay check. An individual resonating with this description would theoretically be less likely to thrive in a Holacratic structure. There is no scientific evidence suggesting there is a particular personality type that works best with Holacracy, but future research could serve to develop such information.

Also, the researchers would have liked to look at how leadership impacts the success of an organization as this theme came up several times throughout the research. It seemed that the way in which the leadership brought the structure into the organization played a huge part in how successful it was, or not. A possible research question for this topic could be: What characteristics of leadership are effective to aid in the successful implementation of Holacracy? Similarly, variables such as size, sector and location would be useful to consider regarding how Holacracy may be implemented successfully in the long run.

Furthermore, it would be interesting to do a comparison of different organizational structures from a case study perspective. Measuring specific variables in different organizational contexts to identify impacts of the structures themselves on the people working within them. Such a case study could use a similar framework (AC elements) to conceptualize social sustainability, asking questions to individuals from different organizational structures (i.e., Holacracy, hierarchy, sociocracy, teal, etc.). Responses could be compared to identify how characteristics of specific structures perform as strategic variables for more socially sustainable organizations.

It could also be useful to look at organizational structures from a systemic point of view and how the structures themselves lead to sustainable development in relation to the larger system

in which they exist. Additionally, it would be interesting to look at the ecological impacts of an organizational structure. I.e., does the way people organize themselves impact how that organization contributes to ecological sustainability?

Due to practical constraints, the researchers could not pursue many fascinating research trajectories that arose during the course of this project. The primary constraint was the limited amount of time the researchers had to complete the study. If more time were permitted, the research design would have incorporated a more action research based approach. This would include spending time with organizations using Holacracy and observing how it is experienced from a first-hand perspective. Beyond that, more voices in interviews would have been included to further understand the breadth and nuance of their experience.

5 Conclusion

Viewing organizations as complex adaptive systems—a subset of the global socio-economic system—allowed the researchers to broaden their understanding of the potential impact of organizational structures. Taking this view lent itself to using the concepts of adaptive capacity and social sustainability to understand how people experience the emerging alternative organizational structure of Holacracy. As mentioned in the introduction, shifting or changing the paradigm of how organizations operate is a powerful leverage point for changing the currently unsustainable global socio-economic system (Meadows 1999). Furthermore, given the link between social capital and social sustainability, the organizational advantage that is realized with increases in social capital (Nahapiet and Ghosal 1998; Lee 2009) is also valid for social sustainability, making this research's findings attractive to organizations across all sectors.

The FSSD's definition of sustainability relies on principles that are used to operationalize the theory on a systemic level. To explicate the function of the relationship between Holacracy and social sustainability on the individual level, this study utilized a wide-reaching questionnaire as its primary data source. Adaptive capacity was identified as the best way to communicate the essence of social sustainability to the individuals within holacratic organizations. Resultantly, questions were developed to understand how AC's specific elements were influenced by the components of Holacracy. A combination of ordinal closed-ended and open-ended questions were used. In addition, interviews were conducted with employees to develop a deeper understanding of their experience with the organizational structure. To organize and interpret the findings, data was codified in similar patterns so that quantitative results could be supported by the qualitative elaborations. This mixed methods approach engendered a multifaceted understanding of the data.

The results of this research yield a number of key findings. While all elements of AC were found to be positively influenced by Holacratic components, the findings from the questionnaire establish the strongest link to the AC element of self-organization. As supported by Missimer et al. (2016a), there is overwhelming support for the importance of self-organization when responding to changes in the environment. In addition, the importance of trust was found through the research as an essential element for organizational resilience (Alder 2001) and was also a standout AC element in relation to Holacracy's influence. The clear links between the Holacracy components of self-organization and trust can be found in the results. In terms of the FSSD's definition of social sustainability, increased self-organization can be linked to removing structural obstacles to the SSPs of influence, competence and impartiality; while increases in trust can assist in removing structural obstacles to health, influence, competence and impartiality.

The key findings listed are significant not only to the field of academia but also offer important information to the practitioners of Holacracy. Through the continued dialogue between the researchers and their external Holacracy advisor, they were able to craft the research in an attempt to meet the needs identified in the field. The findings most applicable to the practitioners are predominantly focused on the implementation process and how its application has an influence on all of the AC elements explored. This study did not set out to understand the implementation process of Holacracy, but it has learned of its importance nonetheless. The researchers recognize that if special attention is paid to the implementation process, self-organization and other elements of AC, could be further improved. Since Holacracy is still in

its early stages of development there is not a one size fits all answer for situations and issues that emerge. This ties back to the initial suggestion of inviting all team members to make sense of the transition of their new structure together. Using common language and fostering shared mental models, can help to create meaning for all individuals involved. Sustaining a conscious effort to engage all members of an organization in co-creating the implementation process, with a clear understanding of why they are doing it, could serve as a critical success factor and activate the transition on a sustainable trajectory.

Holacracy is embedded within the wider movement of alternative organizational structures, borne out of a need to find more purposeful ways of working together and addressing the shortcomings of command and control power structures. Although the explicit intention of developing a socially sustainable way of organizing is not made by the developers of Holacracy, this study has clearly shown where alignments exist which point to areas that lead in the right direction. In this way, this study has the potential to inform the development of Holacracy in a more socially sustainable way. When returning to systems thinking and complexity science, where the idea of a small change can have large unpredictable impacts on the wider system, Holacracy's recent widespread uptake could serve as a unique opportunity to impact the larger system of organizations globally. Further work is required in order to gain a deeper understanding of Holacracy's contribution to social sustainability, however, the researchers see this report as an essential bridge to understanding the role of organizational structure in creating a sustainable world.

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Appendices

Appendix A. Questionnaire example 1.

Distributed Leadership



Describes the dispersion of decision making power to all employees in an organization. This is facilitated by Roles and the circle structure of Holacracy. For Roles, having a clear purpose, domains and accountabilities allows for distributed leadership.

Definitions

- Diversity** - A variety of ideas and responses to a changing environment.
- Learning** - Allows humans to continuously respond to changing environments individually and together.
- Self-Organization** - The coordination that develops from the local interactions between you and your colleagues.
- Common-Meaning** - Human's desire to work towards a purpose and express themselves individually and as a group.
- Trust** - The attitude enabling people to rely on each other and formulate a positive expectation towards one another.

* 7 How do you feel the distribution of power through Roles affects the level of trust within your organization?

Significantly decreases	Slightly decreases	No effect	Slightly increases	Significantly increases
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 8 Rate the impact of **Distributed Leadership** on...

	Very negative	Somewhat negative	No effect	Somewhat positive	Very positive
Diversity	<input type="radio"/>				
Learning	<input type="radio"/>				
Self Organization	<input type="radio"/>				
Common Meaning	<input type="radio"/>				

The topic, “distributed leadership” is described, and all elements of adaptive capacity are defined. With this frame of reference, all respondents could then answer the above five questions with a common understanding. We further tested respondent’s understanding of the questions by asking people (practitioners only) to provide an example at the end of each section, as shown here:

Appendix A. Questionnaire example 2.

* 9 Please describe an experience when **Distributed Leadership** had an impact on any of the elements listed above.

This question allowed the respondents to elaborate on the questions they previously answered, and also gave us an idea if they actually understood the topic to which they were responding.

Appendix B. Quantitative results by question and sample group

For each question, detailed information about how employees and practitioners answered is provided below. The data includes how many participants of each group answered each question (shown as a whole number and a percentage); the average rating of each question (from one to five); the standard deviation from the mean; the number of respondents who answered and the number of eligible respondents who skipped the question.

Q 1. How has Evolving Governance influenced the following elements within your organization?

For all Appendix B Tables. N= number of respondents, S= Skipped question

Employees (N=47, S=34)						
Answer Options	1.Significantl y decreases	2.Slightly decreases	3.No effect	4.Slightly increases	5.Significantl y increases	Rating Avg (1-5)
Diversity	1 (2%)	2 (4%)	17 (36%)	19 (40%)	8 (17%)	3.66
Learning	1 (2%)	1 (2%)	12 (26%)	23 (49%)	10 (21%)	3.85
Self Organization	2 (4%)	1 (2%)	4 (9%)	17 (36%)	23 (49%)	4.23
Common Meaning	1 (2%)	4 (9%)	12 (26%)	19 (40%)	11 (23%)	3.74
Trust	3 (6%)	2 (4%)	12 (26%)	17 (36%)	13 (28%)	3.74

Practitioners (N=31, S=10)						
Answer Options	1.Significantl y decreases	2.Slightly decreases	3.No effect	4.Slightly increases	5.Significant ly increases	Rating Avg (1-5)
Diversity	0	2 (6%)	8 (26%)	13 (42%)	8 (26%)	3.87
Learning	0	0	3 (10%)	10 (32%)	18 (58%)	4.48
Self Organization	0	0	3 (10%)	8 (26%)	20 (65%)	4.55
Common Meaning	0	3 (10%)	3 (13%)	8 (26%)	16 (52%)	4.19
Trust	0	2 (6%)	6 (19%)	9 (29%)	14 (45%)	4.17

Q 2. Rate the impact of distributed leadership on...

Employees (N=47, S=34)						
Answer Options	1.Very negative	2.Somewhat negative	3.No effect	4.Somewhat positive	5.Very positive	Rating Avg (1-5)
Diversity	0	1 (2%)	13 (28%)	22 (47%)	11 (23%)	3.91
Learning	0	1 (2%)	6 (13%)	22 (47%)	18 (38%)	4.21
Self Organization	0	2 (4%)	3 (6%)	18 (38%)	24 (51%)	4.36
Common Meaning	1 (2%)	4 (9%)	9 (19%)	25 (53%)	8 (17%)	3.74
Trust	1 (2%)	5 (11%)	7 (15%)	21 (45%)	13 (28%)	3.85

Practitioners (N=27, S=14)						
Answer Options	1.Very negative	2.Somewhat negative	3.No effect	4.Somewhat positive	5.Very positive	Rating Avg (1- 5)
Diversity	0	2 (7%)	8 (30%)	6 (22%)	11 (41%)	3.96
Learning	0	0	3 (11%)	8 (30%)	16 (59%)	4.48
Self Organization	0	0	1 (4%)	9 (33%)	17 (63%)	4.59
Common Meaning	0	2 (7%)	5 (19%)	10 (37%)	10 (37%)	3.04
Trust	0	2 (7%)	1 (4%)	9 (33%)	15 (56%)	4.37

Employees (N=47, S=34)						
Answer Options	1.Consistently decreases	2.Sometimes decreases	3.No effect	4.Sometimes increases	5.Consistently increases	Rating Avg (1- 5)
Diversity	0	2 (4%)	17 (36%)	23 (49%)	5 (11%)	3.66
Learning	0	1 (2%)	11 (23%)	23 (49%)	12 (26%)	3.98
Self Organization	0	0	5 (11%)	19 (40%)	23 (49%)	4.38
Common Meaning	0	3 (6%)	21 (45%)	15 (32%)	8 (17%)	3.60
Trust	1 (2%)	5 (11%)	12 (26%)	16 (34%)	13 (28%)	3.74

Q 3. What is the effect of Decision Making Authority on...

Practitioners (N=26, S=15)						
Answer Options	1.Consistently decreases	2.Sometimes decreases	3.No effect	4.Sometimes increases	5.Consistently increases	Rating Avg (1-5)
Diversity	0	1 (4%)	8 (31%)	9 (35%)	8 (31%)	3.92
Learning	0	0	5 (23%)	7 (27%)	13 (50%)	4.27
Self Organization	0	0	2 (8%)	8 (31%)	16 (62%)	4.54
Common Meaning	0	2 (8%)	4 (15%)	11 (42%)	9 (35%)	4.04
Trust	0	0	4 (15%)	11 (42%)	11 (42%)	4.27

Q 4. What is the effect of Working with a Purpose on...

Employees (N=47, S=34)						
Answer Options	1.Consistentl y decreases	2.Sometimes decreases	3.No effect	4.Sometime s increases	5.Consistent ly increases	Rating Avg (1- 5)
Diversity	0	3 (6%)	24 (51%)	14 (30%)	6 (13%)	3.49
Learning	0	1 (2%)	21 (45%)	14 (30%)	11 (23%)	3.74
Self Organization	0	1 (2%)	13 (28%)	19 (40%)	14 (30%)	3.98
Common Meaning	1 (2%)	0	13 (28%)	20 (43%)	13 (28%)	3.94
Trust	0	2 (4%)	16 (34%)	17 (36%)	12 (26%)	3.83

Practitioners (N=25, S=16)						
Answer Options	1.Consistently decreases	2.Sometimes decreases	3.No effect	4.Sometimes increases	5.Consistently increases	Rating Avg (1- 5)
Diversity	0	1 (4%)	8 (32%)	6 (24%)	10 (40%)	4.00
Learning	0	0	5 (20%)	9 (36%)	11 (44%)	4.24
Self Organization	0	0	0	11 (44%)	14 (56%)	4.56
Common Meaning	0	0	1 (4%)	7 (28%)	17 (68%)	4.64
Trust	0	0	4 (16%)	10 (40%)	11 (44%)	4.28

Appendix C. Example of Mann-Whitney U-test for statistical significance

The test was conducted on the two data sets for each question, twenty times in total. One example is shown here:

Q 1. How has Evolving Governance influenced the following elements within your organization?

Diversity

E: 1, 2, 17, 19, 8

P: 0, 2, 8, 13, 8

Result 1 - Z-ratio

The Z-Score is 0.5222. The p-value is 0.60306. The result is *not* significant at $p \leq 0.05$.

Result 2 - U-value

The U-value is 9.5. The critical value of U at $p \leq 0.05$ is 2. Therefore, the result is *not* significant at $p \leq 0.05$.

The above results show how the two sets of data E (employees) and P (practitioners) do not have a significantly strong relationship. If the p -value is less than the significance level (e.g., $p < 0.05$), then an investigator may conclude that the observed effect actually reflects the

characteristics of the population rather than just sampling error. Investigators may then report that the result attains statistical significance, thereby rejecting the null hypothesis.

This example, along with all other results shows a p value greater than 0.05, which demonstrates the how closely the variables are connected. It does not demonstrate the likelihood of any apparent connection between the two variables being real. Indeed, there is an observed difference among the two groups. However, it cannot be said with confidence that if the questionnaire was repeated with a larger or different sample group, that the results would be the same.

Notes about Mann-Whitney U test:

p value shows the level of significance. 0.05 is the scientific standard to claim significance between two groups of data. If a p-value is 0.049, the results are statistically significant. If the p-value is 0.051, the results are not.

Z-score indicates the number of standard deviations the datum is above (+) or below (-) the mean.

U-value represents the number of times observations in one sample precede observations in the other sample in the ranking.

Two-tailed hypothesis means you are testing for the possibility of the relationship in both directions



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