Changing to Self-Organization

An exploratory study into the change process of organizations towards self-organization

Master Thesis

in

Business and Management

Jonas Holzfäller

Student Id.: 41080

December 11th, 2017

Stockholm School of Economics

Supervisor: Emma Stenström

Abstract

Self-organizing has become an interesting organizational paradigm for many of today's practitioners. While the workings of self-organizing organizations have been described in many case studies and synthesized in popular management literature, all those who consider transforming their organization towards this new organizational paradigm are left without any theory or insights into how such a change can be conducted.

This empirical exploratory study explores the change process of organizations towards self-organization and establishes core elements of a change theory through the analysis of expert interviews and case studies. In particular, it establishes how change is driven and the role of the change driver. It identifies interventions that move the organization closer to the desired state as well as analytical frameworks that are deemed helpful during the transformation.

Keywords: self-organizing organization, self-managing organization, teal-organization, self-organization, self-management, change theory, change management

Table of Content

List of Figures

1 Introduction

The idea of a self-organizing organization has been around for some time. Especially after self-managing teams had proven extremely productive in the 1990s, researchers asked the question: Why don't we create entirely self-organized organizations? But at this time, self-organizing organizations were not just an abstract idea in the minds of a few researchers. Companies such as Semco or W. L. Gore were already demonstrating that organization-wide self-organization is possible (Shipper and Manz, 1992; Killian, Perez and Siehl, 1998).

In the past few years, Laloux's book "Reinventing Organization" (Laloux, 2014) has renewed practitioners' interest in organization-wide self-organization. Three years after its publication, "Reinventing Organizations" is still one of the best-selling management books.[1] It has inspired many practitioners to rethink the common assumptions of organization and management, judging from numerous articles and discussions in internet blogs and forums[2] and has also caught the attention of the academic community (Van de Kamp, 2014; Bernstein, 2016; Bernstein *et al.*, 2016; Roelofsen and Yue, 2017). Nonetheless, the theoretical framework developed around these examples of self-organizing organization has remained weak.

While some practitioners consider self-organization the future of work, some researchers consider a transformation of hierarchical businesses to self-organization as not just difficult and risky but *"fool-hardy"*[3]. Bernstein (2016) has aimed for a more cautious prediction. Bernstein foresees many organizations beginning to introduce elements of self-organizations, while not completely transforming into one. He states that he would be surprised if by 2030, more than 20 % of all organizations would be fully self-organized, on the other hand, he would also be surprised if less than 80 % would introduce self-management practices. Many practitioners are already transforming their organizations today.[4] The question remaining is therefore: How can such a change process be conducted?

[1] According to Amazon.com sales rank. Accessed: 12/9/17

[2] Namely: Medium.com, search for: self-organizing, self-organization, self-managing, self-management; Teal and self-management Facebook groups; the tealforteal.com network; etc.

[3] "*It would be difficult and risky - even fool-hardy – to try to wholly transform a hierarchical business model into a self-organizing one."* (Ticoll, 2004, p. 13)

[4] Interview I, Interview II, judging from the ongoing discussion in blogs and forums.

A change theory addressing this kind of transformation could reduce the difficulty as well as the risk of the change process. This empirical exploratory research establishes the first fundamental approach into how organizations best transform into self-organization.[5] Beyond the determination of the initial state and the target state, this research focuses especially on the role of the change driver and how change is driven. Moreover, this research identifies helpful theoretical frameworks for the analysis and the communication of the change. Lastly, this research will identify types of interventions that move the organization closer to self-organization.

[5] Researchers have primarily focused on the functioning of self-organizing organizations. The transformation of entire organizations has not yet been addressed.

2 Problem Description and Research Focus

The initial aim of this thesis was to start an inquiry into the nature of self-organizing organizations, to determine how they work and why some of these organizations have failed. During the initial interviews that were conducted, it was surprising that the functioning of self-organizing organizations was not the main concern of interested practitioners[6]. According to these practitioners, the concept of a self-organizing organizations has implicitly been defined through the large number of available case studies. As both of these practitioners were either introducing or planning to introduce self-organization into their companies, the question of how to organize the change process was therefore seen as more pressing.

A thorough research through the common databases, search engines, and journals has not revealed any scientific contributions that address the transformation of organizations into a self-organizing organization. Even in the popular management literature, recommendations regarding the change remain short, abstract, and are not the result of an analysis of a change process, but of logical deductions from the difference between the two organizational states (e.g.: Hamel, 2011). Only the book "Self-Managing Organizations" by Purser & Cabana (1998) made initial propositions regarding the change process. Yet a follow-up research did not provide any evidence that these propositions were picked up or even scientifically verified.

Compared to organization-wide self-organization, the phenomenon of self-managing teams has been researched and discussed in well-known academic journals in the past (Manz, 1992; Cohen and Ledford, 1994; Thibodeaux and Faden, 1994b). Within these studies, researchers have frequently come to the conclusion that these teams tend to clash with other parts of the organization(Manz, 1992, p. 1122; Banai, Nirenberg and Menachem, 2000) and have therefore recommended a transition to self-organizing organization (Bernstein *et al.*, 2016, pp. 41–42). But also within the context of self-managing teams and their organization-wide adoption, no scientific contributions could be found in the common databases and through the common search engines.

Therefore, research on the transformation of organizations towards self-organization is considered to be in a nascent state. This field of research does not possess well-developed

[6] One of the interview partners was a partner at a business consultancy that had just begun the transformation towards self-organization. The other interview partner was an entrepreneur who intended to transform his company into a self-organizing organization. These interviews are referred to in Chapter 6.3.1 and in Appendix B.

constructs or models and has not been studied in the past to such an extent that a broad agreement summarizing multiple researches could be reached. On the contrary, existing literature on the change of organizations to self-organization remains suggestive and in the state of describing phenomena (Purser and Cabana, 1998, pp. 269–298; Hamel, 2011; Laloux, 2014, pp. 267–274).

The following research will therefore explicitly concentrate on the transformation of organizations into this new paradigm of self-organization. This means that many of the existing examples of self-organizing organizations cannot be analyzed as many companies have been self-organizing since their early days. Furthermore, the process will focus on self-organization that is not part of an existing self-management framework, namely the Holacracy, as these models impose predefined governance structures onto the organization (Bernstein *et al.*, 2016, p. 40)

3 Research Background

3.1 Self-Organizing Organizations

This chapter will show that the concept of self-organization is not as new as some have proclaimed (Laloux, 2014, p. 1). Today, many different concepts have been developed that feature the idea of self-organization. Each of these concepts has its very own characteristics and exhibits the concept of self-organization in different forms and shapes. This chapter will also introduce the most important concepts associated with the idea of self-organization and how they have developed throughout the past decades.

In the early 1950s, a group of researchers from the Tavistock Institute around Eric Trist conducted repeated action studies in the British coal mining industry (Purser and Cabana, 1998, p. xix). At that time, it was the common practice in that sector to work on the so-called longwall. Each of these walls was approximately 160 meters long, and the work was organized in three shifts. During the first shift, the coal was undercut by an electric coal cutter. During the second shift, the coal was loaded onto the conveyor, which transported the coal out of the mine. Lastly, during the final shift, the equipment was moved to the next working position (Trist and Bamforth, 1951, p. 1). The working morale in these British coal mines was low, and they faced difficulties in recruiting employees. At the same time, employee turnover was high, as was absenteeism. Due to the improvements of economic conditions after the second world war, workers exhibited a higher intolerance to unsatisfying and difficult working conditions (p.16).

Around this time, researchers from the Tavistock Institute discovered a mine in the South Yorkshire coalfield. Unlike its counterparts, this mine was operated by relatively autonomous groups. Each of them organized themselves with a minimum of supervision; they were interchanging roles and shifts. According to Trist, their commitment was evident, absenteeism was low, accidents were less frequent, and productivity was higher (Trist, 1980, pp. 7, 14).

The discovery of autonomous work groups in this South Yorkshire coal mine may be considered the first discovery of self-organization in modern industrialized organizations (Purser and Cabana, 1998, pp. 27–28; Bernstein *et al.*, 2016, pp. 40–41). The researchers saw their discovery as a new paradigm in how work organization can be envisioned, questioning the prevailing belief that the highest productivity can only be reached through specialization (Trist, 1980, pp. 7–9). Despite the positive performance of these self-organizing teams, they were not adopted throughout the industry. Trist assumed that their results were

rejected as they contradicted the then popular trend towards institution building and setting up technocratic bureaucracies (Trist, 1980, pp. 17–18). In an interview in the 1990s, Trist showed himself dismayed that his research remained unable to initiate a change in the fundamental paradigms of work organization and a diffusion of the principle of self-organization (Purser and Cabana, 1998, p. xix).

But the principle of self-organization has frequently regained popularity since its discovery in the 1950s. In the 1970s and the 1980s, it was the concept of self-managing teams that caught the attention of practitioners and scientists (Cohen and Ledford, 1994, p. 1). Especially in the software industry, self-organizing teams have become a popular tool as a part of the Agile practices (Cockburn and Highsmith, 2001, p. 132; Hoda, Noble and Marshall, 2010, p. 1). Such self-managing teams consist of a small number of people with complementary skills. They are given discretion about how they carry out their work and are therefore empowered to perform many traditional management functions. This may include the management of resources and budgets, the intake of new members, as well as the controlling of their performance (Manz and Sims Jr., 1980, p. 362). But these freedoms remain at the same time confined within boundaries defined by the organization, and in many cases, these teams remained supervised (Flory, 2005, p. 287). The introduction of self-managing teams has often led to enhancement in the company's performance, in organizational learning and in employee commitment (Walton, 1972, p. 77; Cohen and Ledford, 1994, p. 2; Wageman, 1997, p. 49). In 1987, after the introduction of self-managing teams, Volvo was able to reduce defects in its Kalmar Plant by 92 %, overhead cost by 33 %, and absenteeism to 9 % below the industry average (Walton, 1972, p. 77). FedEx decreased service errors by 13 % in 1989 (Bernstein *et al.*, 2016, p. 41). According to Jobidon et al. (2016), even under the particular circumstances of a crisis, self-organizing teams can be more effective.

At the same time, there were also frequent reports of cases where the implementation of self-organizing teams has been a disappointment (Wageman, 1997, p. 49; Flory, 2005) According to Flory (2005). These failures were often caused by an underestimation of the complexity of the change process. According to Manz (Manz, 1992, p. 1122) and Banai et al. (Banai, Nirenberg and Menachem, 2000), self-managing teams are frequently introduced in isolation and clash with the rest of the organization. Without changes to the team’s environment, many of these teams remain subject to significant control and supervision (Manz, 1992, p. 1122). A successful implementation would, according to many researchers, therefore, require an organization-wide change (Thibodeaux and Faden, 1994a, p. 24; Wageman, 1997, p. 60; Flory, 2005, p. 280; Bernstein *et al.*, 2016, p. 41). Banai et al. considered the self-management of entire organizations the natural next evolutionary step (2000, p. 14).

The idea of self-managing organizations has not remained a mere vision. Today, there are many different examples of organizations that are self-organized. Self-organizing organizations are characterized by leaderless, self-managing teams that are given discretion regarding many of the tasks that were previously the responsibility of managers (Manz, 1992, p. 1121). In their most extreme, such organizations are characterized by an absence of formal hierarchies and power. This means at least the absence of a middle management if not the absence of any kind of management. Also, the staff functions are commonly integrated into the working teams, and transparency is created regarding all aspects of the company. W.L. Gore is one frequently cited example (Shipper and Manz, 1992; Manz, Shipper and Stewart, 2009)[7]. Companies such as FAVI, The Morning Star Company, or Patagonia are additional examples of companies that are considered as self-organizing (Laloux, 2014, pp. 57–59).

Today, there are multiple concepts encompassing the concept of self-organization, each of them in different forms. One of the most recent concepts is the "Teal Organization" presented by Frederick Laloux (2014) in his book "Reinventing Organization."

A Teal organization is explicitly designed to addresses the last stage of Maslow's Hierarchy of Needs (Maslow, 1943): self-actualization (Laloux, 2014, p. 43). The Teal organization has three core elements that characterize what Laloux considered the next evolutionary stage in human organization. Firstly, they use the process of self-organization to efficiently organize work without hierarchies or the need for consensus. Secondly, wholeness aims to welcome more than just a *"narrow professional self"* (p. 56) into the organization, creating room for emotions, intuition, and spiritual aspects (p. 56). Finally, a Teal organization's purpose is considered to be evolutionary, shaped by the members of the organization (p. 56). The concept of Teal organizations is therefore not just a kind of self-organized organization but a concept that complements self-organization with additional elements aiming to create an environment that achieves not only efficiency but also the self-actualization of the individual.

Beyond the concept of Teal, self-organization is part of the, popular today, organizational concepts of the Holacracy (Bernstein *et al.*, 2016, pp. 40–41). The Holacracy is an organizational governance approach which relies on a set of rules and clear structures. These aim to replace top-down hierarchies and the management function. They are designed to be robust and sophisticated enough to keep organizational members aligned and the organization unified. Within these set boundaries, the organization self-organizes and creates additional processes, roles, and functions. But it is the rigid definition of specific processes and rules that makes some question the extent to which the Holacracy is self-organizing

[7] Citations according to scholar.google.com: 141 and 31 respectively.

(Hamel and Zanini, 2014). It could be argued that in a Holacracy, authority is no longer executed according to the hierarchical position but is exerted through depersonalized rules.

3.2 Change Theory

The ever-present change of most organizational environments has been established in innumerable books and papers (Burnes, 2005, p. 73). It has become a consensus that organizations are required to adapt to the changing environments to survive and prosper. Graetz (2000) argues that initiating and leading the required organizational changes is one of the primary tasks of today's managers (p. 550). According to Kerber & Buono (2005), change can be differentiated into three different approaches:

- Directed change: is *"driven from the top of the organization, relies on authority and compliance, and focuses on coping with people's emotional reactions to change."* (Kerber and Buono, 2005, p. 25) Such a change is considered to be decisive, but it is likely to be faced with resistance during the implementation (Kerber and Buono, 2005, p. 25).

- Planned change: *"[…] may arise from any level in the organization but ultimately is sponsored at the top.*" (2005, pp. 25–26) This change approach often relies on a range of change techniques that aim to mitigate the resistance to change within the organization. This mode of change relies, at least implicitly, on the three-phase model of change according to Lewin (1951).

- Guided change: *"emerges from within the organization and from people's commitment and contributions to the purpose of the organization"*(Kerber and Buono, 2005, p. 26). This approach especially draws on micro-level changes that are assumed to continuously occur within the organization. In a guided change, this alteration is allowed to spread into other departments of the company and cause a shift in the wider organization (Kerber and Buono, 2005, p. 26). Here, the challenges do not lie in the unfreezing of the organization but in the directing of the change that is already underway (Weick and Quinn, 1999, p. 366).

Change theories aim to help practitioners to successfully conduct these required changes. They are frameworks assisting in understanding and directing the change endeavor (Dunphy and Griffiths, 1994, p. 542). They can identify critical aspects of change processes and recommend actions (Dunphy, 1996, p. 542)

For example, Lewin's (1951) three-stage model of planned change is considered one of the most influential examples of a change approach developed throughout the past decades. It assumes the necessity to unfreeze – meaning to destabilize the current equilibrium -, to move – i.e., to change to a desirable behavior -, and to refreeze – as in the stabilization of the new equilibrium – the organization (Weick and Quinn, 1999, pp. 362–363; Burnes, 2017, pp. 334–336).

But the track record of change processes in practice is devastating. According to multiple researchers, approximately 70% of all change efforts fail (Balogun and Hailey, 2004 referred to in: Todnem By (2005)). By (2005) as well as Windsor (Windsor, 2003, p. 34) argue that this is a consequence of a fundamental lack of valid change frameworks (p. 370). By (2005) describes the existing frameworks as *"a wide range of contradictory and confusing theories and approaches"* (p. 370).

4 Specification of the Research Focus and Procedure

According to this alleged lack in the theoretical rigor of change theories, one important question needs to be answered for the development of a change theory for self-organization: What constitutes a comprehensive change theory? And what are its elements? In the following chapter (4.1), five elements will be presented that according to Dunphy & Griffiths (1994) are required for a comprehensive change theory. These elements constitute the framework for the subsequent research. In Chapter 4.2, it will be laid out how each of these elements required for a comprehensive change theory will be determined.

4.1 Essential Elements of Change Theory and Specification of the Research Focus

Within the context of this previous discussion regarding the theoretical rigor of change theory, Dunphy & Griffiths (1994) saw the necessity to determine elements that a "fully-fledged or comprehensive" (Dunphy, 1996, p. 542) change theory must establish. These elements aim to explain a theory's underlying assumptions, especially regarding the fundamental functioning of an organization, as they remain partially untestable. A change theory must also determine the desirable state of the organization and the core elements that cause the organization to change. The determination of the change levers includes predictions regarding the effects of specific interventions (Dunphy and Griffiths, 1994, p. 3). According to these requirements, Dunphy & Griffiths (1994, p. 3) state five elements essential for a comprehensive change theory:

1. A basic nature of the organization.
2. A desirable model of an effectively functioning organization. This model gives direction to the change process and serves as the measurement of the assessment of the change process.
3. An analytical model, theoretic perspective, or diagnostic framework. This framework specifies the core change variables and how they interrelate.
4. An intervention theory stipulating when, where and how to intervene to move the organization closer to the ideal model of the organization.
5. A definition of the role of the change agent.

These elements of a comprehensive change theory established by Dunphy & Griffiths provide the fundamental framework for this study. The subsequent chapters will discuss each of these elements and aim to determine their individual characteristics in a change theory that intends to transform the organization of companies into self-organization. The detailed procedure intending to determine each of these elements will be presented in the following chapter.

4.2 The Research Proceeding

The aim of this thesis is to determine each of the elements that are required for a change theory towards self-organization, according to the framework by Dunphy & Griffiths (1994), presented in the previous chapter.

In Chapter 5, a conceptual exploration of theory will be conducted to determine, according to Dunphy & Griffiths' (1994) framework, the two required states of organizations. In Chapter 5.1, a historical analysis of the development of organizations will be conducted. This chapter presents the developments from the organizational principles of scientific management and the bureaucracy to today's organizations. The prevalent basic nature of today's organizations, as the first required element, will be presented in Chapter 5.1.3.

Chapter 5.2 establishes a concept of a self-organizing organization as the desirable model of an effectively functioning organization, the second element of Dunphy & Griffiths' (1994) framework of change. As an extensive research into the fundamental characterization of self-organizing organizations in the common databases did not return any meaningful results,[8] this chapter will draw upon existing principles of self-organizing systems within the natural sciences to determine the character of a self-organizing organization. It will be assumed that these principles can be mapped to organizations. The concept of a self-organizing organization based upon these principles will be presented in Chapter 5.2.2. This organization will serve as the model of the desirable organization in this change theory.

Subsequently, Chapter 6 and 7 will address the empirical research that will determine the three remaining elements of Dunphy & Griffiths' (1994) change theory. These are namely the role of the change agent, the analytical model or theoretic perspective, and the interventions that are conducted during a transformation towards self-organization. In Chapter 6, the methodology and the analytical procedure that is utilized in this study is presented. Since this research focused on the change process towards self-organization can only rely on little preexisting literature (see Chapter: 2) an exploratory theory-oriented research will

[8] List of databases and researched keywords: Appendix E

be conducted. This procedure of an exploratory theory-oriented research will be presented in Chapter 6.1. Furthermore, a methodology for the analysis of the gathered materials is required. In this case, the Qualitative Content Analysis by Mayring will be used for the evaluation of the material. This method will be presented in Chapter 6.2.

This Qualitative Content Analysis requires that the analyzed material is presented as well as the procedure and the direction of the analysis itself. Therefore, the analyzed material will be presented in Chapter 6.3, namely the expert interviews in Chapter 6.3.1 and the case studies in Chapter 6.3.2. Lastly, in Chapter 6.4, the direction of the analysis as well as the analytical procedure will be explained and exemplified. Only after the research proceeding is made transparent, the results of the research will be presented in Chapter 7.

According to the requirements of the exploratory research proceeding, firstly, the results of the analysis of existing theory will be presented in Chapter 7.1. Each of the three desired elements of the change theory will be presented in its individual subchapter.

The subsequent step, required by the procedure of the exploratory research, is an analysis of practice, which will be conducted in Chapter 7.2. In this chapter, the cases and the expert interviews will be analyzed. The results of this analysis, already in reference to the previous results from the exploration of theory, will be presented. These results will be described according to the three required elements of the change theory in Chapters 7.2.1 to 7.2.3. Chapter 7.3 will then highlight the limitations of this research.

Finally, Chapter 8 will summarize the results and indicate opportunities for future research resulting from this study.

5 The Conceptual Exploration of Theory

5.1 A Historical Analysis of Organizations

This chapter will take a historical perspective on the developments of organizational theory and practice. The goal of this analysis is to synthesize a basic nature of today's organizations as the initial state of organizations in the change theory, according to the framework of Dunphy & Griffiths, as presented in the previous chapter. According to Kieser (1994), the structure and behavior of today's organizations is influenced by historical developments, especially underlying ideologies that have developed over time (p. 609). A historical analysis is, therefore, capable of exposing organizational behaviors as the result of intentional or unintentional choices, instead of being determined by natural laws. The following paragraphs intend to highlight the principles of *Rational Management* as still significantly influencing today's organizations (Merkle, 1980, p. 11; Boje and Winsor, 1993, p. 57; Drucker, 1999, p. 81; Volberda, 1999; Wren, 2011, p. 19).

The term *Rational Management* in this case refers to managerial concepts that were driven by a general trend of the early 20th century, referred to by sociologists as rationalization (Weber, 1978; Abercrombie, N., Hill, S., & Turner, 1984, p. 319; Bruce and Yearley, 2006, pp. 201, 255). Within the organizational context, rationality describes in particular the application of scientific methods and tools to achieve a set of defined goals in the most efficient way (Grey, 2009, p. 24). In particular, these ideas of the early 20th century were represented by the concepts of Scientific Management by Frederick Winslow Taylor and the description of the Bureaucracy by Max Weber.

In the following, Chapter 5.1.1 will describe the rise of rational management approaches as the prevalent way of organizing work in the early 20th century. This description aims to highlight the fundamental character of these rational approaches. Chapter 5.1.2 will show how the organizational requirements have changed after in the middle of the last century. Lastly, Chapter 5.1.3 will describe how theory has driven organizational changes and how the principles of the bureaucracy still maintain their grip on many modern organizations.

5.1.1 The Age of Rational Management

During the late 19th century, the organization of work in European and American factories was in the hand of workers. Supervisors and skilled workers were performing not just the actual labor, but they were also responsible for many tasks that are today considered managerial. These responsibilities included the organization of the labor force as well as their

supervision and control. Accordingly, these supervisors and skilled workers enjoyed wide-ranging autonomy and discretion (Burnes, 2017, pp. 42–44). But at this time, the skills of the workers were primarily considered to be a source of problems or potential threats. Especially since workers were thought to dislike work and therefore needed to be coerced, controlled, directed, and even threatened to contribute their skills to the achievements of organizational goals (McGregor, 1987, pp. 34–42).

Taylor and other practitioners intended to eliminate these inefficiencies by changing the behavior of workers through the reconfiguration of the work organization. The fulfillment of a task could therefore no longer be left to the discretion a worker. Instead, managers were to optimize the working process through the standardization of tasks and the elimination of individual judgment by the worker (Drucker, 1999, p. 80; Volberda, 1999, p. 19). This exclusion of the workers' judgment aimed to break the knowledge monopoly previously held by foremen and skilled workers (Merkle, 1980, pp. 13–14; Grey, 2009), making them controllable and therefore increasing the efficiency. According to Taylor, it was the managers' responsibility *"[...] of gathering together all the traditional knowledge which in the past has been possessed by the workman and then of classifying, tabulating and reducing this knowledge to rules, laws and formulae [...]"* (Taylor, 1911, p. 36) Workers could now be employed, not according to their technical skills, but to the extent they were motivated, controllable and the degree to which they could be induced into participating in the system (Merkle, 1980, p. 2; Boje and Winsor, 1993, pp. 60–61).

The concept of the bureaucracy, although different in its details (Burnes, 2017, pp. 66–67), became the white-collar equivalent to the scientific management of the blue-collar factories (Merkle, 1980, p. 3). Similar to Taylor, Weber perceived the need for a rational basis, in this case of large-scale administrative undertakings (Wren, 1972, p. 229). He described authority as a prerequisite to executing large-scale administrative undertakings effectively. By authority, he referred to *"the probability that certain specific commands will be obeyed by a given group of persons."* (Weber, 1978, p. 212). The bureaucracy was therefore characterized by clearly defined rules, laws, and predefined procedures and routines, eliminating individual judgement and preferences form the administrative process (Burnes, 2017, p. 60). Weber argued that empirical evidence pointed towards the conclusion that the purely bureaucratic type of organization with authority based upon rationality was capable of attaining the highest degree of efficiency (Weber, 1922, p. 128).

These concepts developed and described by Taylor and Weber played an important role in this general trend of rationalization, occurring throughout the early 20th century (Weber, 1978; Merkle, 1980, p. 51; Abercrombie, N., Hill, S., & Turner, 1984, p. 319; Bruce and Yearley, 2006, pp. 201, 255). The concept of rationality spread not only through organiza-

tions, but it became part of the basic curricula of nearly all business schools in the United States (Nelson, 1992, pp. 87–96) and was the core doctrine behind a range of governmental reforms (Merkle, 1980, p. 68), diffusing throughout science, religion, and moral behavior (Abercrombie, N., Hill, S., & Turner, 1984, p. 320). This far-reaching distribution of rationality has been criticized by many contemporary intellectuals, including Max Weber (Weber, 1920; e.g.: Adorno and Horkheimer, 1972).[9] Merkle (1980) considers rationality to be the most powerful, yet invisible force shaping today's society (p. 3).

5.1.2 The Rise of the Knowledge Worker

During the second half of the 20th century, many companies had shifted their competitive focus from efficiency towards quality and adaptability, due to changes in the competitive environment (Volberda, 1999, pp. 56–57). Automation improved and became increasingly capable of replacing manual labor in the factories. This trend moved the value creation of companies from manufacturing to services and knowledge work. Drucker describes this new class of workers as *knowledge workers* (Drucker, 1999, p. 79)

According to Davenport (2005), knowledge workers are different from the factory workers of the early 20th century as they are characterized by *"[…] high degrees of expertise, education, or experience, and the primary purpose of their jobs involves the creation, distribution, or application of knowledge"* (Davenport, 2005, p. 10). The requirements of these knowledge workers significantly differ from those of blue-collar workers. According to Drucker, six factors contribute to the productivity of knowledge workers: (1) Knowledge workers continuously need to redefine their tasks to adapt to changing environments. Therefore, (2) the responsibility to manage their tasks must be given to the worker. (3) Just as the tasks are continually changing, the solutions must continuously be adapted. Accordingly, constant innovation is required. (4) Constant innovation again requires constant learning and transfer of knowledge between the workers. (5) The productivity of the knowledge worker thus needs to be measured in quality (e.g., creativity, innovativeness) and not in quantity. (6) Lastly, through the direct involvement of the worker's intellect in the production process, the company depends on the individual abilities and the knowledge of workers, who need to be treated as assets instead of cost factors (Drucker, 1999, pp. 83–83; Schoemaker and Jonker, 2005, p. 514).

Practitioners as well as scientists have acknowledged the mismatch that exists between many common, rationality-driven, organizational structures and the productivity requirements of knowledge workers (Tampoe, 1993, p. 49; Drucker, 1999, p. 91; Scarbrough, 1999, p. 8). Knowledge workers are required to exercise discretion which had previously

[9] Weber himself described "the cosmos" of modern rationality as a "shell as hard as steel" determining the style of life of all individuals (Weber, 1920).

been removed from the organization. They need to possess individual knowledge, which was considered a threat in a rationality-driven organization (see: Chapter 5.1.1). Tampoe (1993) argues that these rational structures of organizations fail to provide an environment which motivates knowledge workers (p. 54). This motivation seems necessary, as these new tasks of knowledge workers are less controllable for supervisors. According to Scarbrough (1999), managing knowledge workers has, therefore, become one of the primary challenges for today's management practices (p. 8).

5.1.3 Organizations Today

Since the 1960s, driven by theoretical and practical developments, organizations have become complex and multilayered, influenced by many different perspectives and theories (Kiechel, 2012, p. 65; Burnes, 2017, pp. 74, 106). Many of these approaches have been a reaction to the mechanistic view of organizations and the neglect of human beings within the organization, frequently still from a perspective of productivity (Burnes, 2017, p. 84).

The human relations movement, notably associated with Elton Mayo, emphasized the importance of social relationships between organizational members in an organization and showed how regard for workers improves performance (Volberda, 1999, p. 22; Kiechel, 2012, p. 65). While Taylor assumed that workers only had material needs, the human relations movement also included non-material needs (Burnes, 2017, p. 84). Maslow addressed the variety of human motivation with his famous Maslow Pyramid (Maslow, 1943). He differentiated human needs into a hierarchy in which material needs only constitute the most basic of human motivations. He concluded that humans, after satisfying basic material needs, pursue higher order needs (Burnes, 2017, pp. 84–85).[10] Building upon Maslow's insights regarding human and therefore worker motivation, McGregor (1987) developed the dichotomy of *Theory X* and *Theory Y*. Theory X represents the assumption of a loathing worker, while Theory Y assumes that workers seek fulfillment in their work and can be intrinsically motivated. He pointed out that the perception and actions of managers are shaped depending on their inner assumption or theory of worker motivation (Kiechel, 2012, p. 67; Burnes, 2017, pp. 86–87). Beyond these insights regarding worker motivations, a perspective of contingency emerged in the research of organizations. Contingency rejected the idea that there is one best way of organizing an organization and adopted a systems perspective on organizations, assuming that an organization's performance depends on a wide range of variables which are constantly changing (Burnes, 2017, pp. 93–95).

[10] Eric Trist's concept of Socio-Technical Systems aimed at mediating between the requirements of the technical environment and the requirements of workers. It introduced methods of democratic decision making into organizations and added human goals to common technical and economic goals (Cabana, 1995, p. 17).

The changes in the working requirements (see: chapter 5.1.2) as well as the changes in perspective brought about by the theoretical developments led researchers such as Bennis (1967) in the late 1960s and 1970s to announce the death of the bureaucracy (Burnes, 2017, p. 86).

But many studies argue that the principles of rational management are by no means a phenomenon of the past (Merkle, 1980, p. 11; Boje and Winsor, 1993, p. 57; Drucker, 1999, p. 81; Volberda, 1999; Wren, 2011, p. 19). They exist in in today's organizations not as remains of the past, but they have frequently been relabeled and reintroduced through new concepts. Total Quality Management, modern accounting systems, and the concept of shareholder value are just a few present-day examples:

- Boje & Winsor (1993) argue that Total Quality Management (TQM) represents one example of how modern concepts still encompass the ideology of scientific management. They argue that these concepts *"masquerade under the costume"* (p. 57) of worker's empowerment, involvement, and development (1993, p. 57). But at their core lays control by rational means. Especially TQM's core technique of *Kaizen*[11] resembles Taylor's scientific management in its dedication to the execution of tasks according to standardized worksheets and predefined cycle times (Boje and Winsor, 1993, p. 61).

- Kulesza et al. (2011) offer evidence for the influence of scientific management principles through modern accounting systems. Modern accounting systems offer an opportunity to lift the idea of Scientific Management to a "*Digital Taylorism*" which allows performance measurements in real time, instead of weekly or monthly performance measurements. (Kulesza, Weaver and Friedman, 2011; The Economist, 2015).

- The concept of shareholder value, as a phenomenon of the financialization of businesses during the last decade of the 20th century, also bears a strong resemblance to the principles of Scientific Management. Ezzamel, Willmott & Worthington (2008) argue that the creation of shareholder value is driven by accounting measures and organizational restructuring. The requirement of financial discipline is driven from a central position of control and is executed through financial metrics that are sup-

[11] "Japanese concept of continuous improvement" (Kurian, 2013, p. 159)

> posed to eliminate unnecessary cost factors, especially labor, and therefore resemble Taylor's scientific management (p. 135)

Management practices have retained an ambivalent relationship with these new organizational concepts (Kiechel, 2012, p. 74). According to Pfeffer (1993), this may be, at least partially, the result of a low level of paradigm development, i.e., technical certainty and consensus over concepts (Pfeffer, 1993, p. 607). According to Burns (2017, pp. 106–107), faced with this complexity, managers might prefer the straightforward rational management approaches.

Present-day organizations are therefore still trying to balance the technical requirements of the production and the requirements of the humans within the organization. On the one hand, many of today's organizations remain bureaucracies, relying on the division of labor, authority, hierarchies and formalization. On the other hand, these bureaucracies have changed from the machine bureaucracies prescribed by Taylor to human bureaucracies. A human bureaucracy is more flexible, allows for more discretion and respect for the human beings working within it, structures are more flexible, and the motivation and commitment of employees becomes part of the overall consideration.[12]

[12] Judging from the previous discourse, utilizing the categories developed by Medeiros (1977) as presented in (Myint, 1997).

5.2 Establishing Principles of Self-Organizing Organization

A research through the common scientific databases and journals, has not been able to reveal any definition of a self-organizing organization. The description of a self-organizing organization, as one has been provided in Chapter 5.2.2, remain a generic characterization of what existing self-organizing organizations look like. But to appropriately establish a change theory, the model of an effectively functioning organization needs to be determined, as it serves as a direction for the change process and as a measurement (Dunphy and Griffiths, 1994, p. 3). To establish this second element required by Dunphy and Griffiths' change framework, an inquiry into the fundamental principles of self-organizing organizations is indispensable.

5.2.1 Adapting the Principles of Self-Organizing Systems to Organizations

The phenomenon of self-organization is comparably new within the organizational sciences but it is a phenomenon that has been well researched within the complexity sciences, a field that summarizes different branches of the natural sciences' research of complex systems. (Mitleton-Kelly, 2003, pp. 10–12). The rules and patterns in self-organizing systems are the result of an individual or of collective learning (Holland, 1995, pp. 60–63). Order is spontaneously created and continuously recreated by autonomous and self-reinforcing actions at the micro level (Kelso, 2001, p. 13845; Tharumarajah, 2003, p. 185; Anzola, Barbrook-Johnson and Cano, 2017, p. 221). In the past, the theories of self-organization as part of the complexity sciences have primarily been applied to fields such as physics (e.g., fluids), biology (e.g., morphogenesis) or chemistry (e.g., chemical reactions) (Kelso, 2001, p. 13844). But also the social sciences and especially management sciences have become interested in this extensive framework of complexity sciences to better understand the link between micro-level actions and macro-level patterns (Anzola, Barbrook-Johnson and Cano, 2017, p. 222).

A systems perspective on organizations is not a new idea. There have been direct adaptations of complexity frameworks from the natural sciences into the social sciences in the past, e.g., Luhmann's Systems Theory (Porr, 2002, p. 57). But since their adaptation, these concepts have existed independently in the social sciences (Gilbert *et al.*, 2015, p. 530). Systems Theory for example includes the concepts of self-reference, which may be considered a form of self-organization (Simon, 2015, p. 24). But according to Gilbert et al. (2015), this process is framed in a *"[...] particular understanding of communication that is no longer compatible with all aspects of current complexity frameworks"* (p. 531). The systems perspectives in the social sciences have accordingly not profited from recent developments in the natural sciences such as self-organizing systems, focusing on the creation of order.

To create an initial concept of a self-organizing organization, it seems reasonable to draw upon this existing framework of the complexity sciences, a field that is considered to pose one of the most rigorous and overarching theoretical frameworks in contemporary sciences (Anzola, Barbrook-Johnson and Cano, 2017, p. 222). Many researchers agree that the principles of today's complexity sciences can be adopted from the natural sciences to the social sciences and organizations (Morgan, 1980, p. 613; Kelso, 2001; Grobman, 2005, p. 354; Gilbert *et al.*, 2015, p. 529; Anzola, Barbrook-Johnson and Cano, 2017). But how this can be achieved is highly disputed within the scientific community. McKelvey (1999, p. 10) argues that an efficient adoption from the complexity sciences to other fields requires the development of dedicated mathematical and computational models, similar to those in the areas of natural science. He argues that a loose adoption would render the terms and concepts of the complexity sciences meaningless. Van Uden, on the other hand, argues that, contrary to the statement by McKelvey (1999), a loose or metaphorical adaptation of concepts is required to make the adoption successful (Uden, 2005, p. 63).

Especially such metaphors play an essential role in the organizational sciences. Morgan (1980, p. 613 ff.) argues for the importance of metaphors in organizational theory because metaphors are means of *"seeing organizations and their functioning"* (Morgan, 1980, p. 616). For example, the organization as a machine has been the standard metaphor of rational organizations, and it has profoundly influenced how organizations are understood and designed.

5.2.2 The Self-Organizing Organization

In this chapter, the principles of self-organizing systems will be metaphorically applied to organizations with the aim of establishing principles of self-organizing organizations. Gilbert et al. (2015) propose four essential characteristics that define a self-organizing system in general: autonomy, pattern creation, robustness and resilience, and dynamics. These principles will be explained and adopted in the following chapter. The model that will be established will constitute an ideal-type description, an exaggerated concept with the goal of describing a specific phenomenon, while at the same time leaving room for ambiguity, diverting from this ideal type description (Weber, 1999, p. 190).[13] Such concepts have become a widespread tool for the description of organizational concepts (Doty and Glick, 1994, p. 230). Examples will be provided to show that the definition can include many of

[13] According to Max Weber: *"An ideal type is formed by the one-sided accentuating of one or more points of view and by the synthesis of a great many diffuse, discrete, more or less present and occasionally absent, concrete individual phenomena, which are arranged according to those one-sidedly emphasized viewpoints into a unified analytical construct. […] In its conceptual purity, this mental construct cannot be found empirically anywhere in reality." – "It [the ideal type] is not a description of reality but it aims to give unambiguous means of expression to such a description."* (Weber, 1999, p. 190)

the common phenomena of self-organizing organizations, but these examples are not intended as a verification of the model.

Autonomy

Autonomy is the first essential element of a self-organizing system according to Gilbert et al. (2015) and represents the "self" in the self-organization. Any change within the system is the consequence of the behavior of these elements, instead of externally imposed. Accordingly, these elements are the driving force behind the creation of patterns in systems, to be addressed in the subsequent paragraph (Gilbert *et al.*, 2015, p. 529). Within a social setting, autonomy describes the ability of an individual or a system to reflect upon its preference and actions. This reflection entails the ability to accept, maintain or change preferences and to act upon them (Shoemaker *et al.*, 1988, p. 10). In a self-organizing organization, actors may therefore decide and act autonomously.

> **Example:** At Buutzorg, a Dutch non-profit neighborhood nursing organization, each team of nurses is autonomous in nearly all their decisions regarding their work. They decide which patients to accept and how many nurses they require. They administer to the patients and hire nurses, whenever they deem necessary. The nurses determine how they distribute the tasks, schedule their training and monitor their work. All decisions are made within group meetings but do not require consensus; instead, they may be made autonomously after a process of consultation and the absence of a veto (Laloux, 2014, pp. 65–68).

But at the same time, autonomy in a self-organizing system is not unlimited, as the system aims to maintain its identity. The autonomy of each element is therefore indirectly limited to actions which do not endanger the wellbeing of the overall systems, as the process of self-organization remains implied in the autonomy (Dietrich, 2001, pp. 130–131). Within a social setting, autonomy in a self-organization therefore always implies responsibility, rejecting the frequent connotation of autonomy with chaos and anarchy (Tharumarajah, 2003, p. 186). Self-organizing organizations thus are likely to rely on strong values and mutual trust, guiding the individual actions not only to follow self-interest but the interest of the system as a whole.

> **Example:** At FAVI, as well as Semco[14], production targets and time clocks were eliminated to demonstrate management's trust. Instead of a decrease in productivity, the productivity increased after the changes. Since the elimination of time clocks, workers began to feel responsible for their work and sometimes stayed

[14] The change process of Semco is illustrated in a Case Study in Appendix C on page 69.

longer if a production cycle needed to be finished (Laloux, 2014, pp. 80–81). The autonomy given to the workers in combination with a relationship of mutual trust enabled workers to take responsibility for their work.

The aspect of autonomy, especially regarding preferences and decision making in an organizational setting implies the availability of information. If pieces of information are withheld, actors may be deceived and the lack of information may interfere with the individual's autonomy (Shoemaker *et al.*, 1988, p. 14). Information transparency thus plays an essential role in a self-organizing organization:

> **Example:** At Buutzorg, the performance of all teams is made public to all members of the organization via the intranet. At FAVI and Sun Hydraulics, a publicly listed international producer of hydraulic cartridge valves, all information is accessible through computer stations that are located throughout all the companies facilities (Laloux, 2014, pp. 111–112). At Semco, all company information was made accessible (Semler, 1995, p. 136 ff.). Information transparency is a common phenomenon throughout most self-organizing organizations.

Pattern Creation

The creation of patterns is the second characterizing element of self-organizing systems, according to Gilbert (2015). The creation of patterns distinguishes a self-organizing system from mere chaos (Gilbert *et al.*, 2015, p. 529). These patterns are the result of the process of self-organization and spontaneously as well as episodically stable (Kelso, 2001, p. 12845; Gilbert *et al.*, 2015, p. 592). These temporarily stable patterns form boundaries that allow the categorization and description of the system (Tharumarajah, 2003, p. 189; Anzola, Barbrook-Johnson and Cano, 2017, p. 224). Thiétart & Forgues (1995, p. 21) argue that so-called "attractors" play an important role in the process of pattern creation. Attractors are considered an *"island of stability […] in a sea of chaos"* (Thiétart and Forgues, 1995, p. 26). Attractors are not yet understood, but they seem to attract systems' structures to a limited amount of spaces, making self-organizing systems reasonably predictable (Thiétart and Forgues, 1995, p. 21). They are considered the reason for the reappearance of similar patterns in unrelated entities.

Pattern creation is also an essential process in social systems. Patterns in general "*are those arrangements or systems of internal relationship which give to any culture its coherence or plan, and keep it from being a mere accumulation of random bits"* (Kroeber, 1968, p. 119). Patterns arise through cycles of iteration. Through their constant repetition, they develop into a form of order (Mitleton-Kelly, 2003, p. 22).

Within an organization, processes can be understood as institutionalized and managed action patterns designed to produce a desired outcome (Kurian, 2013, p. 221). These processes are not necessarily limited to the creation of a service or a product, but they may also include the hiring of new coworkers, strategy development, research and development of new products, communication, conflict resolution and many more. While processes in general are often associated with bureaucratic organizations as they are prescriptive and resemble work instructions known from Tailor's scientific management, processes can also be found in self-organizing organizations:

> **Example:** AES, a publicly listed international energy producer and supplier, follows a so-called *"advice process"* for its decision making. At AES, employees are required to consult everyone in their decision making. While they are not expected to integrate the recommendations and are ultimately free to decide, they must go through the process of seeking advice and taking this information into serious consideration (Laloux, 2014, p. 100).

> **Example:** Morning Star, the world's largest tomato processing company, relies on a defined stage process for the resolution of conflicts. Workers are required to solve issues before a colleague is nominated as a mediator. As a next step, a panel of relevant colleagues can be called upon, before in the last stage, the founder and president of the company is asked to come to the committee to add his perspective (Laloux, 2014, pp. 112–114).

Roles may also be considered as emerging in the process of pattern creation. Whenever activities are frequently reoccurring, one person is likely to take responsibility for such a process. Through this reoccurrence of responsibility, a role is created. Other tasks may not be reoccurring, and they will therefore not require the creation of a dedicated role.

> **Example:** At FAVI, a former machine operator was of the opinion that the organization could be more innovative if they were to actively scout for new technologies and suppliers. After he was able to demonstrate the benefits of this activity to the team, this machine operator became responsible for the worldwide sourcing of new technologies and supplies (Laloux, 2014, pp. 78–79).

Robustness and Resilience

Resilience refers to a system's ability to react to external shocks, to adapt and to maintain its existence throughout theses shocks and change accordingly. This quality of dynamics is the third characteristic element of self-organizing systems. *Robustness* refers to the system's ability to survive and to resist change, while resilience refers to its ability to adapt

(Gilbert *et al.*, 2015, pp. 529–530) The way the system reacts is determined through the process of self-organization (Tharumarajah, 2003, p. 188). In practice, it can be difficult to determine whether a system reacted through robustness or resilience. A system may respond to an external change through adaptation, maintaining the status of the system. In other cases, the change violates the boundaries of the system, and the system reframes itself to maintain its existence (Kelso, 2001, p. 12846).

Resilience enables an organization to adapt to changes and therefore allows an organization's long-term survival. Carter (1971, p. 427) for example showed that avoiding uncertainty interferes with the long-term survival of organizations. Grinyer and Norburn (1975) found that high degrees of communication in general and informal communication in particular positively correlate with an organization's financial performance (p. 88). Self-organizing organizations are therefore likely to rely on extensive informal and direct communication:

> **Example:** W.L. Gore aims to have a maximum of 150 to 200 employees at each of their facilities, to maintain a close-knit interpersonal environment which allows for frequent face to face communication between all members of the facility (Shipper and Manz, 1992, pp. 50–52).

Furthermore, self-organizing organizations are likely able to effectively react to changes in their environment.

> **Example:** Some of the self-organizing organizations have an outstanding track record, even under difficult circumstances. Since Semco's transformation to self-management, they have grown six-fold despite sever recessions and strong inflation in brazil. Profits have risen five-fold (Killian, Perez and Siehl, 1998, pp. 8–9). FAVI has remained profitable with returns above 15%, producing parts for the automotive industry in their production facility in France, competing successfully with competitors in low-wage countries (Gilbert, Crozet and Tegelborg, 2013, p. 1).

Dynamics

Dynamics refers to the process inherent in self-organizing systems. It is the final essential attribute of a self-organizing system. This process causes the non-static character of the system, as it stabilizes and destabilizes the system at the same time. The dynamic changes in internal variables are caused by the non-linear processing of, e.g., information. This means that a constant information input does not result in a constant output. The changes resulting from this dynamic may not only be gradual, but may also occur in steps or in a hierarchical fashion. This constant change is the unit of the analysis of dynamic systems

and not merely the individual states of the system at a particular point in time (Gilbert *et al.*, 2015, pp. 529–530; Anzola, Barbrook-Johnson and Cano, 2017, pp. 224–225).

Dynamics in an organization may refer to the spontaneous change of the previously discussed patterns. When the control parameter crosses a critical value, instability occurs, leading to the formation of new or different patterns (Kelso, 2001, p. 13846). This means that the processes and roles that are created through the process of pattern creation are only temporarily stable. Once these processes or roles are no longer considered as required, they are likely to disappear. At the same time, self-organizing organizations experience the constant creation of new processes and roles (Manz, Shipper and Stewart, 2009, p. 239).

> **Example:** At W. L. Gore, teams are established to address certain challenges. After the challenge is solved or has disappeared, the team dissolves again (Manz, Shipper and Stewart, 2009, p. 239).

The Self-Organizing Organization

Summarizing the previous theoretical discussion allows the desirable state of the organization to be determined, as required for the development of a change theory according to Dunphy and Griffiths (1994).[15] The ideal state of a self-organizing organization is one that is characterized by the four elements of self-organizing systems. The workers are autonomous in their decision making while mutual trust and shared responsibility for the organization steer the decision making of the individual. The organization is characterized by information transparency enabling its members to make the required decision. Based upon these autonomous decisions, reoccurring patterns are translated into processes and roles to effectively and efficiently fulfill the organization's responsibilities. Moreover, the self-organizing organization relies on extensive informal, face to face communication between its members. This system is ever changing and therefore capable of adapting or resisting to changes in the environment to successfully maintain its existence.

[15] See Chapter 4.1

6 The Methodological Background of the Research

The evaluation of a qualitative study is only possible if the research proceeding and assumptions are made transparent (Corbin and Strauss, 1990, p. 314). This chapter will, therefore, present the methodology and the analytical procedure utilized in this study. Chapter 6.1 will present the Exploratory Theory-Oriented Research as a suitable methodological approach for this early research on the change process towards self-organization. As this methodology is empirical in nature, an additional methodology is required for the analysis of the data that has been gathered. The Qualitative Content Analysis will be presented in 6.2 as the underlying methodology behind the analysis of the exploration of practice. As part of the analytical proceeding prescribed by the Qualitative Content Analysis, the materials analyzed in the empirical section of the study will also be presented in Chapter 6.3. Furthermore, the methodology requires a description of the analytical procedure of the material, which will be presented in Chapter 6.4.

6.1 Exploratory Theory-Oriented Research

This research aims to conduct an exploratory research of existing theory and practice to determine initial knowledge that is considered as the infrastructure for the understanding of the change process and which are intended to contribute to the development of the theory (Browker and Star, 2000, p. 320).

The concept of exploratory research in the social sciences is frequently misunderstood as a fishing expedition that randomly looks for generalizations. The findings of such studies are often criticized as weak in sampling, validity, and generalizability (Stebbins, 2001, p. 5). But Edmonson & McManus (2007) argue that these quality criteria are not suitable for the evaluation of exploratory studies in the earliest phase of theory development (Amy C Edmondson and Mcmanus, 2007, pp. 1159–1167). As previously shown in Chapter 2, the research towards self-organizing organizations is still at a nascent stage. In this phase of theory development, an exploratory study, which prioritizes the identification of patterns, the creation of constructs and measures as well as the generation of suggestive theories as the starting point for further research, is more suitable (Amy C Edmondson and Mcmanus, 2007, pp. 1159–1167). This study will accordingly not aim for validity and generalizability. However, an exploratory research is not just random exploration for hypotheses. Exploratory research follows a set of broad guidelines (Stebbins, 2011, p. 2). Dul & Hak (2008) recommend an initial examination of existing theory before a consecutive explora-

tion of practice is conducted (Dul and Hak, 2008, p. 48). The process of the research to be conducted is illustrated in Figure 1:

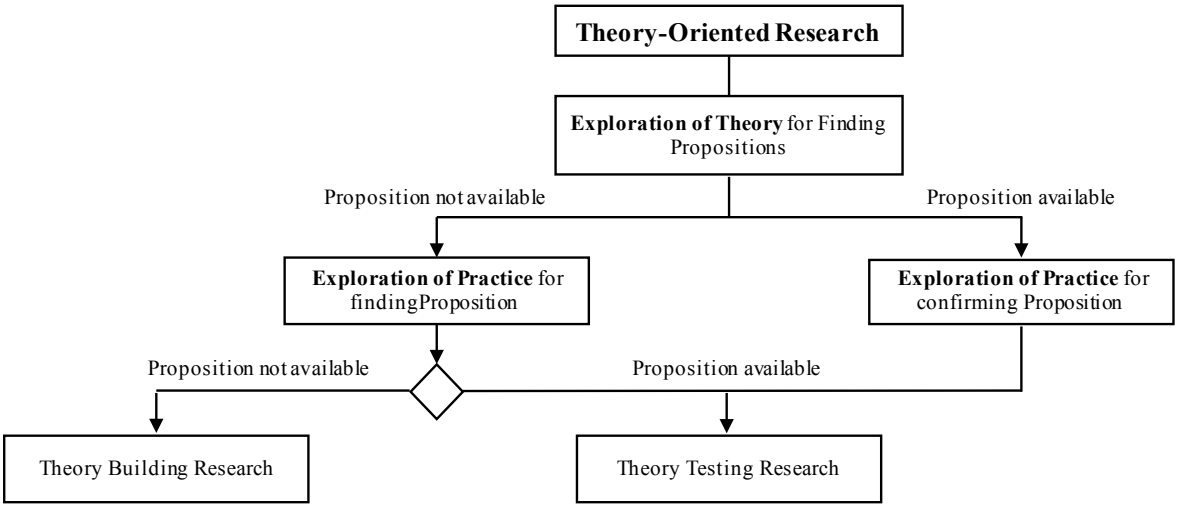

Figure 1: The research procedure. Flowchart after (2008, p. 40)

The exploration of existing theory will be conducted in Chapter 7.1 The relevant sources for this exploration will be existing publications such as academic books and academic papers (Dul and Hak, 2008, p. 48). These academic sources do not focus on self-organization in particular but are gathered from associated concepts such as self-organizing teams, that involve aspects of self-organization. The intention of this part is to provide an overview of the current knowledge to determine what is considered to be known and what aspects remain unknown. It seeks to identify propositions that require replication, propositions that have not been tested, propositions that are contradictory, and fields in which no propositions have yet been made (Dul and Hak, 2008, p. 48).

Furthermore, Dul & Hak (2008) recommend an exploration of practice, which will be conducted in Chapter 7.2. It focuses on so-called “theories-in-use” which is knowledge held by practitioners on what works in practice and what doesn't. The exploration of practice acknowledges that practitioners create more or less explicit theories for the research subject, which are predominantly unrelated to academic research. Insights on the research object can be derived from any source that is in contact with the object of the study such as general and professional media publications, communication with practitioners, such as interviews, as well as experiential reports by professionals involved in such change processes (Dul and Hak, 2008, p. 38).

There are two reasons why such a diversity in sources is useful under the given circumstances of the study. On the one hand, this study addresses internal change efforts of organ-

izations, which are commonly not publicized by the organizations. The identification of and access to such information and the involved individuals is therefore extremely difficult. On the other hand, unsolicited first-person accounts on the topic are publicly available and accessible through the internet. Such sources are a rich source of data for scientific research that should not be neglected (Robinson, 2001, p. 714). According to Glaser & Strauss (1967), the primary reason why such sources are commonly avoided by researchers is due to their focus on the verification of assumptions, which requires control over the conditions of the creation of the sources. As verification and generalizability are not the goal of this research, but rather a general exploration, this research can rely on a wider range of sources (Glaser and Strauss, 1967, pp. 161–162). All these materials may potentially be just as valuable as direct observations and interviews, especially during an exploratory research (Glaser and Strauss, 1967, p. 163).

The different data sources will be analyzed, as recommended by Edmonson & McManus (2007), through a qualitative analysis, intending to identify evidence of constructs and patterns (p. 1174). In this case, the Qualitative Content Analysis according to Mayring (1983) will be utilized. The collection of data and the analysis are a process of constant iteration and are therefore constantly refined throughout the research process (Corbin and Strauss, 1990, p. 419; Amy C Edmondson and Mcmanus, 2007, pp. 1160–1163; Dul and Hak, 2008, p. 187).

6.2 The Qualitative Content Analysis

The information and materials to be gathered will be analyzed according to the method of "Qualitative Content Analysis," developed by Mayring in 1983. Over the past years, this method has become one of the most widely used methods in German qualitative social science research (Mayring, 1983, p. 7). The aim of the qualitative content analysis is the *"analysis of material that originates from any form of communication"* (p. 11). The method links qualitative empiricism with the systematic analysis of quantitative research. The systematic review, according to clearly defined codes, creates an intersubjectivity of the results (p. 50). This approach may reject frequent accusations of arbitrariness towards qualitative research (p. 29). It is for this reason that, contrary to a free interpretation, the analysis of the material relies on a generally sequential, yet iterative procedure.

The format of the material as well as the circumstances of its creation are necessary for its understanding, and it is of importance to comprehend the material within its context of communication (p. 50). Accordingly, in Chapter 6.3, the material will be presented as well as its formal character and the circumstances under which it was generated (pp. 54-55). Subsequently, in Chapter 6.4, the direction of the analysis as well as the proceeding of the

analysis will be explained. The direction of the analysis states what or who will be inferred as the subject from the material. This may be the material itself, the communicator or the recipient of the material. Within the description of the proceeding, the technique of analysis and accordingly the sequential procedure of the analysis are featured. They form the basis for the subsequent analysis. The results of this analysis will be presented in Chapter 7.

6.3 Presentation of the Analyzed Material

The following chapter will legitimize and present the utilized materials or sources that will be analyzed during the exploration of practice. In Chapter 6.3.1, the role of long expert interviews within qualitative research will be discussed, and insights will be provided regarding how the interviews were conducted and documented. In Chapter 6.3.2, subsequently, the utilization of cases for an exploratory research study will be legitimized, and each of the analyzed cases will be briefly presented to the reader.

6.3.1 The Long Expert Interviews

For this exploratory study, long interviews were conducted with experts in the field. According to McCracken (2011), long interviews are *"one of the most powerful methods in the qualitative armory"* (p. 1), especially because they give the researcher the opportunity to take a closer look at the perceptions and worlds of other people. They allow the exploration of phenomena that are commonly closed off to researchers (pp. 2-3). Especially in this case, the utilization of long interviews can provide insights into a phenomenon, such as the change process of a company, that would otherwise require long-term observations.

Such long interviews are structured differently from traditional and guided interviews, because they do not aim to evaluate of verify hypotheses. Instead, they aim to learn about a phenomenon from the experiences of the individuals. A long interview is, therefore, driven by few open questions concerning general topics (Seidman, 2006, pp. 9–10; Mullins and Jorgensen, 2007, p. 19). In this particular case, these topics were oriented along the three elements of Dunphy and Griffiths' (1994) change framework, namely the role of the change agent, the analytical models, and the interventions.

All interviews were conducted with interview partners who are commonly considered as "experts." Experts are seen as valuable sources of knowledge, not because of their ability to interpret results, but they are especially valuable if the research is concerned with the reconstruction of sequences and social situations. Moreover, experts may not only hold knowledge on one individual case but on multiple cases. Not the expert himself/herself is the primary focus of the research, rather their knowledge on the research object (Bogner and Menz, 2009, p. 47).

The search for interview partners has therefore focused in particular on change drivers, executives, or consultants who have been involved in one or multiple change processes towards self-organization. The interview partners have in some way led an organizational change process within an organization, three of the interview partners through their leadership role in the organization, and one in the capacity as an external consultant. These individuals have proven extremely difficult to identify, as many companies do not publicize such change endeavors, and the number of companies implementing such a change is presumed to be small. Six requests for interviews remained unanswered, and three additional interviews could not be organized within the time frame of the research. The interviewed experts were primarily found and contacted through the researcher's social network and personal contacts. One interview was arranged by e-mail. Each of the six conducted interviews lasted 60 to 120 minutes. The interviews were either recorded and transcribed, or, if the recording was deemed not possible, e.g., due to background noises, they were documented through notes, which included direct quotes of important sentences. A list of the conducted interviews can be found in Appendix B.

Such long expert interviews draw from a smaller sample size. They can therefore be criticized as giving exaggerated significance to the experience of specific incidents (Bogner and Menz, 2009, pp. 43–44). These limitations resulting from the interviews will again be highlighted in Chapter 7.3. But as this exploratory study does not aim for generalizability or validity, but for an initial understanding of the phenomenon, the method is deemed appropriate and valuable.

6.3.2 The Cases

Case study research is a common as well as valid research strategy in business research (Dul and Hak, 2008, pp. 20–21, 24). It is commonly conducted through the analysis of one or multiple cases according to qualitative criteria. Dul and Hak (2008) consider this technique especially useful whenever the research object is highly complex, no theory is available, and when the context of the research object is important (Dul and Hak, 2008, p. 24). The nascent stage of this field of research has been presented in Chapter 2, and McCutheon and Meredith (1993) consider case study research one of the primary means for exploration (pp. 239-241). Cases are also often used as a tool of illustration. In this study, one of the cases will be utilized to exemplify a transformation towards self-organization.[16]

The utilization of cases during an exploratory study is therefore a legitimate procedure. The cases in this study have been chosen according to three criteria, corresponding with the research focus presented in Chapter 2:

[16] The case study of Semco can be found in Appendix D.

- The company or organization was undergoing an organization-wide transformation towards self-organization.
- The organization has not employed a predefined concept such as Holacracy.
- The available material addressed the change process, the change interventions, and the perspective of the change driver. Preferably, the material was created by the change driver himself/herself.

In the following, the three cases that will be analyzed together with the interviews in the exploration of practice will be presented:

Semco

> *"If you want my advice, take a deep breath, pluck up your courage, and feed the policy manual to the shredder, one page at a time. Let companies be ruled by wisdom that varies from factory to factory and worker to worker."*
>
> *- Ricardo Semler (Semler, 1995, p. 97)*

The change process of Semco towards self-organization is likely one of the best-described cases of such a change process. Semler, then CEO of Semco and change driver, documented his experiences in his book "Maverick: The Success Story Behind the World's most Unusual Workplace" (1995).

When Ricardo Semler took over the family's business in the early 1980s, the Brazilian "economic miracle" just ended and the company was hit hard by the economic recession. Through intensive restructuring, the company was made profitable again in 1982, but the restructuring led to increased tension between the workers and the company's management, which was perceived as tyrannical and overbearing.

Guided by the vision of a company that exerted less control over its workers, and of workers that took responsibility for their work, Semler started a restructuring of the company that should last for 25 years. Initially, only the most obvious mechanisms of control were abolished. But throughout the transformation, the departments were restructured into work groups that were given broad authority and were increasingly taking over managerial tasks. This led to the obsolescence of middle management, as well as of support functions, which were either removed or reduced in the course of the change. Lastly, the hierarchies within the company were also significantly reduced and organized into circles. The only remaining hierarchy consisted of the executive circle, a circle made up of the heads of the departments and a last council which included all remaining workers. Semco went as far as having their workers determine their own salaries.

Throughout the past decades, up until 2014, Semco has grown every year by 27 % on average. This growth is especially remarkable against the background of multiple economic crises, multiple currency devaluations, and multiple hyperinflations in Brazil. Semler withdrew in 1999 from the daily operations of the business. He remains loosely involved and is still the principal shareholder.

As the case is well documented by multiple sources, the transformation of Semco is well suited to serve as an illustration and exemplification. A case study has been created by the author to exemplify and illustrate a transformation towards self-organization. This case description can be found in Appendix D.[17]

Traum-Ferienwohnungen

Traum-Ferienwohnungen (which translates as "dream holiday homes") is a German online marketplace for vacation homes. It was founded in 2001 by a group of friends who were initially trying to rent out one of their families' holiday homes on the internet. In 2007, the company had moved into new office spaces and started hiring employees. Exchanges between employees, originally informal, were being formalized, and departments were created which were slowing down company processes. The table tennis table did not prove enough to hide these changes. The question was: How to regain the agility of the founding period? The self-organization and restructuring of the company into small units, dedicated to each of the different types of customers, was considered the best possible solution to improve the organization.

At the time of the change in 2015, the company had around 70 employees. The change was initiated during a period when the business was prospering, and it was launched by the companies' management. The process itself was to be designed and managed by an elected committee from the employees together with the management and with the support from an external consultant.

Today, the company is located in Bremen, Germany, has around 140 employees and is one of the ten most visited tourism websites in Germany. In 2016, @Leisure Group, a subsidiary of the German publishing house Axel Springer acquired the majority share.[18]

[17] The sources that have been utilized for this case study can be found in Appendix C on page 74.

[18] The sources that have been utilized for this case study can be found in Appendix C on page 74.

FAVI

FAVI is a French pressure die-casting specialist based in Hallencourt, France. As of 2013, the company employed more than 400 people and generated a turnover of $ 75.5 million primarily in the automotive sector. FAVI supplies the majority of European automobile manufacturers with gearbox forks and is considered a world leader in this field.

The production of automotive parts has been hit especially hard by offshoring during the past decades. FAVI's mission is therefore unusual but reasonable given the circumstances: to remain operational in Hallencourt to protect its workers' jobs. (Gilbert, Crozet and Tegelborg, 2013, p. 1). To achieve this goal, FAVI focuses on quality and innovation. This includes excellence and innovation in the work organization, in the processes, and in product-market innovation.

The company has transformed incrementally under the leadership of Jean-François Zobrist throughout the past 30 years. The change process was focused on the introduction of mini-factories that consisted of approximately 30 workers, each micro production site dedicated to one specific customer. These mini-factories were continuously introduced over a period of five years and were initially tutored by an expert, who generally was a former manager. They were given responsibilities for functions previously conducted by support functions, such as planning, sales, and hiring.

By 1996, most of the former managers had retired and were not replaced. The mini-factories started working autonomously.

In 2004, the remaining company's support functions were eliminated and moved into the mini-factories, further increasing their autonomy. The mini-factories finally took over procurement and started managing their own warehouses.[19]

6.4 Direction of the Analysis and the Evaluation Procedure

The case studies as well as the expert interviews were analyzed with the goal of gaining insights regarding the change process towards self-organization. These insights include all information regarding the cognitive background of the change driver (if the material was produced by the change driver) and all insights regarding the actions that were taken as well as the reasoning behind these actions (Mayring, 2000, p. 51 f.).

According to the purpose of this inquiry, a structuring content analysis was chosen (Mayring, 2000, p. 11 ff.). Due to the current state of knowledge and the character of an

[19] This case is primary based on the accounts provided by Jean-François Zobrist, then CEO of the company and driver of the change. The sources that have been utilized for this case study can be found in Appendix C on page 75.

explorative research, this approach of structuring the material seems most suitable and promising to achieve meaningful results. The particular procedure that will be described in the following is illustrated in Figure 2. First, few initial categories were deduced from the established state of knowledge. These categories are in particular "the change driver," "the theoretical perspective," and "the interventions." Initial subcategories within these categories were deduced through the coding and synthetization the existing theory. In the next step, the Semco case as well as one interview were coded. All these coded elements were then synthesized, resulting in new sub-categories within the three super-categories. Only afterwards, the remaining cases and expert interviews were coded and analyzed. Since the analyzed materials continually create new categories, interviews and cases were frequently re-coded, to assess the material according to newly created codes. Examples of the coding hierarchy, the coding scheme, and the synthetization can be found in Appendix A on page 65

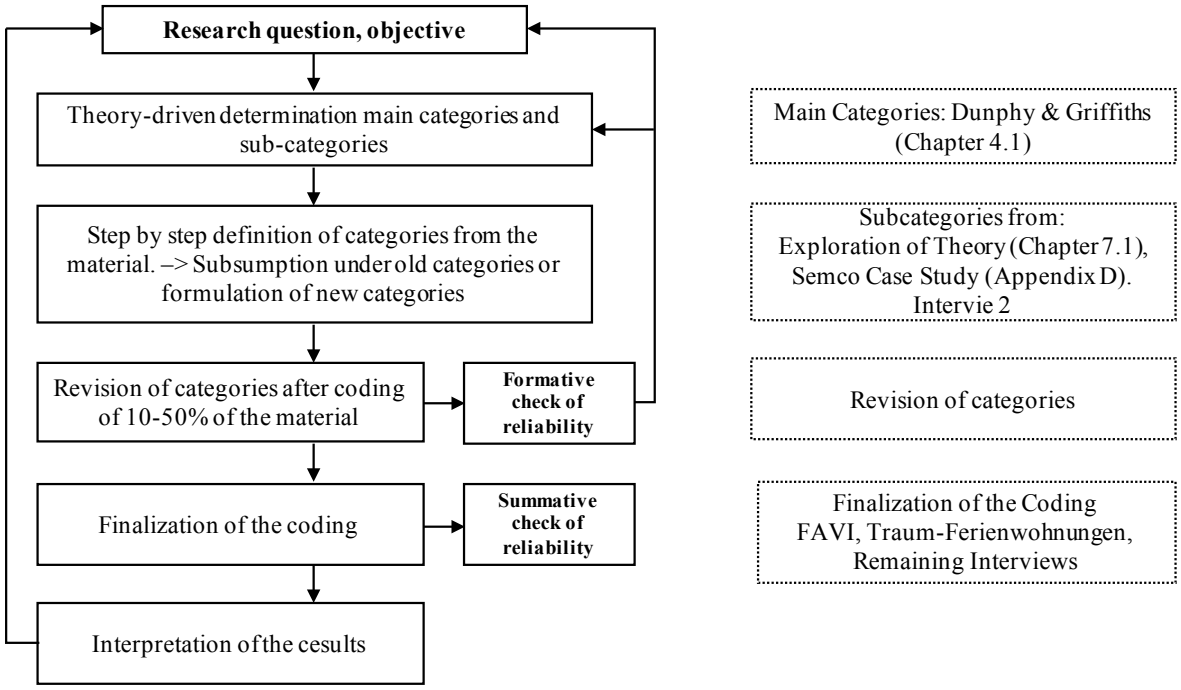

Figure 2: Analytical Procedure with annotations. Flowchart after (Mayring, 2000, p. 11,14)

7 Presentation of Results

As required by the procedure of an explorative theory-oriented study, prescribed by Dul and Hak (2008), an analysis of the existing theory will be conducted first.[20] The results of the exploration of theory will be presented in Chapter 7.1. The results of the subsequently required step, the exploration of practice, will be presented in Chapter 7.2. This section will conclude with a reflection upon the limitations of the presented results in Chapter 7.3.

7.1 Exploration of Theory

As mentioned previously, there is only little material available directly addressing self-organizing organizations and the transformation of organizations into this state. This analysis will therefore also include research from adjacent fields, especially self-managing teams.

7.1.1 The Change Driver

Cabana & Purser (1998), who have provided one of the most explicit recommendations regarding the implementation of self-organization in their book on self-managing organizations, argue that a bottom-up approach is the only reasonable approach for the introduction of self-organization, since a change imposed on employees will remain unable to empower employees and to induce ownership. They recommend a process they call participative design. Participative design aims to provide employees with tools that allow them to shape the change process themselves (Cabana, 1995, p. 16). This approach relies on the assumption that the employees hold critical knowledge for the redesign of the organization, which is superior to the knowledge of external consultants (Purser and Cabana, 1998, p. 57). Furthermore, this approach intends to reduce the resistance of employees towards the intended chance. This is supposed to result in a quicker and more effective process, but these assumptions have not been validated through research so far.

Similarly, Manz and Sims recommend a participative approach in their book "Business without Bosses" (1993). They recommend the introduction of a design team that is responsible for the change process. In their example, the design team consisted of 11 volunteers from within the company and was formally empowered by a steering committee, which was responsible for the oversight of the change processes and also set clear boundaries for the design team. Still, the goal was to yield as much freedom as possible to the design team. This design team also acted as an initial change driver as it did not have a formally

[20] See again: Chapter 6.1

assigned leader. It was to make decision consensually. Through an analysis of the current business, as well as technical and social systems in the organization, they determined how the teams within the organization were to be set up, how large they would need to be, how decisions were to be made and how roles and processes would be determined. Manz and Sims especially recommend that these teams should not work on these issues on a full-time basis, but instead should remain within their everyday environment to communicate their work, avoid distrust from other parts of the organization as well as prevent their detachment from organizational reality. The recommendations were first to be tested in one team, before being applied to the entire organization (Manz and Sims, 1993, pp. 89–97).

7.1.2 The Analytical Framework

There are only few recommendations regarding the theoretical perspective available in the currently existing literature. One of these few recommendations, but recurring in multiple contexts, is the perspective of socio-technical systems. It is a theoretical perspective that was developed by the Travistock Institute along with their research of self-organizing teams in the British mining industry (Trist, 1980, p. 8). From their observations, they had concluded that work is not most efficient if it is only organized according to the technical requirements. Instead, the best way of organizing work would be to seek a match between technical and social systems (Trist, 1980, p. 9).

Accordingly, socio-technical systems consist of two sub systems: technical systems and social systems. Technical systems referred to the different machines and technologies applied during the production process. Social systems referred to the operators of these machines as interconnected – interconnected with the technical system as well as between each other. In this sense, organization should not only be designed according to the technical requirements, i.e., the requirements of the machines and the production processes, but also according to the social requirements of the workers. (Manz and Sims, 1993, p. 94; Vermaas *et al.*, 2011, p. 80). The Socio-Technical Systems Design is illustrated in Figure 3. This would include an extension of perspective, from primary work systems, which produce products, towards entire organizations and communities. This approach would also imply a shift from the external motivation of workers towards a degree of internal motivation. This would mean that workers' jobs need to be reasonably demanding, offer opportunities for personal development and decision making, as well as imbuing the worker's job with his social needs for recognition and identity (Trist, 1980, p. 11,30).

Redesigning an organization according to the technical requirements, the environment as well as the social requirements would accordingly result in an ideal fit between the systems and maximize productivity (Manz and Sims, 1993, p. 94).

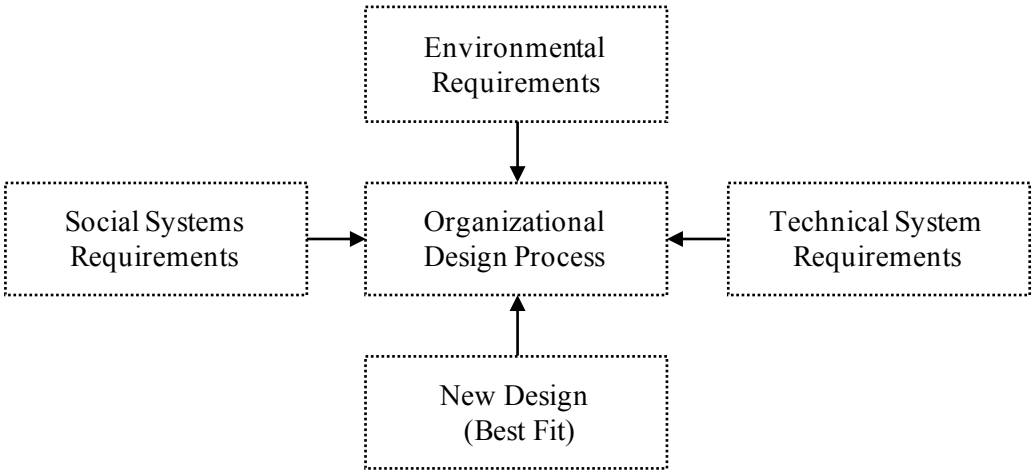

Figure 3: Socio-Technical System Design according to (Manz and Sims, 1993, p. 94)

At the same time, this concept has not been thoroughly refined and remains unable to answer critical organizational questions. For example, the role of institutions and instructions remain unanswered as they can neither be directly attributed to the technical system nor the social system (Vermaas *et al.*, 2011, p. 80).

7.1.3 The Interventions

Manz and Sims (1986), who discuss the implementation of self-managing teams, which may be an initial step during the general implementation of self-organization, do not provide direct recommendations for interventions during the implementation phase. But they highlight challenges that occur during the implementation. Such challenges need to be addressed through interventions at that stage. The first is a phenomenon which is generally associated with the implementation of self-managing teams. Especially senior managers expect to see results of changes too soon and might, therefore, abort the change process prematurely. This is especially the case because, similar to other change processes, teams do not immediately perform at their maximum capacity. They may initially underperform compared to the previous modus operandi.

New responsibilities and the new autonomy to make decisions as the new way of collaboration require a very different skill set compared to the previous organizations. On the one hand, employees have to be enabled to take over responsibilities and duties previously held by managers, such as planning and organization. But they also need to learn new ways to communicate, to work in groups, and to solve conflicts, which they are more likely to encounter (p. 109-111).

Lastly, an important issue which needs to be addressed is the role of managers. Managers' sense of authority, status, power, and control is commonly eliminated through the change

process. Managers who expect to lose their power and fear becoming dispensable are likely to resist the change effort. If these employees are to be kept within the organizations, interventions must aim to change their understanding of leadership within the organization and/or offer meaningful alternative roles such as facilitators or coaches (p. 101-106).

These challenges highlighted by Manz and Sims, as well as by Mintzberg, are no explicit propositions on how to conduct the change towards self-organization. Instead, they emphasize important issues. These issues will be used in the coding and categorization of the following exploration of practice.

7.2 Exploration of Practice

The following chapter will present the results of the empirical exploration of practice. These results have been created through the analytical procedure described in Chapter 6.4, particularly the coding, synthetization, and recoding of the conducted interviews (as presented in Chapter 6.3.1) and the case (as shown in Chapter 6.3.2). The results of this analysis will be presented in reflection of the previous results gained in the exploration of theory (see Chapter 7.1) This will therefore constitute the synthesized results of the research. As in the previous chapter, the results will again be displayed individually according to elements of Dunphys and Giffiths' (1994) framework of change theory, which this research has sought to establish. Chapter 7.2.1 will present all insights gained surrounding the role of the change driver and how change is driven within the organization. Chapter 7.2.2 will present those analytical frameworks, which the research has identified as helpful in guiding and conducting the organizational transformation. Finally, Chapter 7.2.3 will present the interventions which seem to be reoccurring in a transformation towards self-organization.

7.2.1 The Change Driver

There are multiple reasons why organizations aim to change to self-organization. But self-organization is not an appropriate solution for all kinds of organizational problems.

The reasons that initiate the change process are manifold. They are commonly triggered by a dissatisfaction of the employees or the management. Especially employees may be dissatisfied with their working conditions. On the other hand, the necessity for change may also be identified by the organization's leadership. It is often either dissatisfaction with the employees' detachment from their tasks and their inability to make decisions, as in the case of Semco, or the organizational leadership may perceive the mechanisms of command and control as absurd, especially under the assumption that work may also be rewarding to employees and that humans take pride in what they do.

> *"How a human being is treated is important. In many organizations, the human being has disappeared from the organization."*[21]

> *"At that time, employees were clocking in and out and received sanctions for any delay. But I was dreaming of a company where everyone would naturally respect the working hours without a bell or control."* (Zobrist, 2014, p. 184)

[21] „Wie mit Menschen umgegangen wird, ist wichtig. In vielen Organisationen ist der Mensch aus der Organisation verschwunden." (Interview 2)

But self-organization is not the solution to all kinds of organizational challenges. During the expert interviews, it was emphasized that for some organizations, for some people, and for some tasks, self-organization may not be the best solution:

> *"It must be acknowledged that self-organization is not suitable for every organization, every situation, every human being. It is possible that in some companies, the leadership of employees through traditional formats is simply the most efficient way to organize work. Self-organization is not an end in itself, but remains a mean to an end."*[22]

Also, the timing of the change process must be appropriate. It must not endanger the overall functioning of the company.

The organizational leadership must make the decision for the change and communicate the general direction towards self-organization.

According to the recommendations made by Purser and Cabana (1998) in Chapter 7.1.1, a guided change is recommended for a transformation to self-organization, as it is considered the sole way of empowerment. But the research of practice, especially the analysis of the case studies, indicates that the decision to implement such a change is regularly made by the organizational leadership. The interviewed experts agree that especially the decision to change must be made by the organizational leadership. They are responsible for defining and communicating this goal, under the assumption, that the change is planned with self-organization in mind. The transformation is therefore not emergent but imposed.[23] This represents at least a partial contradiction between the existing theory and the practical execution in the cases as well as the recommendations given by the change experts in the interviews.

This directed or planned transformation is considered necessary, as a change to self-organization is radical, and self-organization may not be the natural consequence of an abolishment of formal structures and formal authorities. The (old) organizational principles are deeply rooted in many employees. At Semco, employees continued to ask for permission on issues they were already given authority for. It is therefore required to overcome these patterns and general resistance to changes. Not all employees will welcome a change to self-organization.

---

[22] „Es muss anerkannt werden, dass Selbstorganisation nicht in jeder Organisation, nicht in jeder Situation, nicht für jeden Menschen das Richtige ist. Es kann sein, dass in manchen Unternehmen die Führung von Mitarbeitern in traditionellem Format schlicht die effizientere Art der Organisation ist. Selbstorganisation ist kein Selbstzweck, sie dient weiter einer Zweckerfüllung." *(Interview 2)*

[23] Or according to the definition of Kerber and Buono (2005) "directed" or "planned" (see Chapter 3.2)

"The initial order to change comes from the top. In the organization as well as in a department."[24]

But the definition of this goal must already adhere to the non-linear and dynamic character of the desired organizational character and leave room for the individual creation of the system.

"And this is similar to the change process. You take a soft look. The goal is in a cloud instead of being a clear point."[25]

The goal must, therefore, be clearly stated, but more as a principle or a general vision that works as orientation and guidance during the change process.

The change can be driven and planned by the organizational leadership or a dedicated project group. The utilization of a project group is currently considered to be the best practice.

A broad definition of the target state leaves room in the actual planning and design of the change process. While no real planning process, aiming for the introduction of self-organization, has been conducted at FAVI or at Semco, a change plan is recommended by the interviewed experts. Such a plan in particular helps those in the organization that require structures and also creates templates for what is about to come. These templates are derived from the assumption that there are certain organizational challenges that every organization must find answers for:

"There are reoccurring challenges that an organization must be able to provide answers for. One should have prototypes for such situations. By these challenges I mean: decision making processes, strategy processes, feedback processes, roles, responsibilities, etc."[26]

For most of these organizational challenges, there are existing prototypes on how to design such processes in an environment of self-organization, for example in the Agile or the Holacracy concept (see Chapter 3.1). These prototypes may be utilized, adapted, and integrated into the organization at an early stage. Such planning would enable an organization to draw from previous experience and reduce overall adaptation difficulties and frustration.

Even though the change process as a whole is imposed on the organization, the change itself does not have to be designed and planned exclusively by the organizational leader-

[24] Translation by the author: „Der initiale Auftrag zum Wandel kommt von der Spitze. Sei es der Organisation oder der Abteilung." (Interview 1)

[25] Translation by the author: „Und so sehe ich das Ziel bei Change-Prozessen halt auch. Du nimmst es in so einen weichen Blick. Das Ziel liegt eher in einer Wolke als in einem Punkt." (Interview 3)

[26] Translation by the author: „Es gibt so sich wiederholende Herausforderungen auf die jede Organisation Antworten haben müssen. Dafür hätten wir Prototypen bauen sollen. Damit meine ich Entscheidungsprozesse, Strategiediskurse usw." (Interview 4)

ship. The change may be planned and designed by a group, which commonly consists of the organizational leadership as well as employees. The introduction of such change groups is consistent with the recommendations given in the previous research of theory (in Chapter 7.1.1) by Cabana and Purser (1998) and is also considered best practice by the interviewed experts. At Semco, representatives from production and administration met with the organization's leadership to discuss and co-create the change. At Traum-Ferienwohnungen, employees were democratically elected into the committee.

> *"Currently we are working with a big cooperation, and they have introduced a task force of 25 people, to bring agility into the organization. In general, this is a good idea. We know this as a best practice example from many other companies [...]."*[27]

> *"The change process itself should be co-created from the bottom up, and employees should be involved a lot. This requires time and resources, but it also makes the introduction easier."*[28]

The change process is long-lasting, iterative, and requires constant readjustment and feedback. Plans continuously need to be adapted.

Assuming that self-organization is introduced gradually, the change process itself is iterative. If change plans have been created, they always need to be redefined and adapted. Feedback is extremely important for the required adjustments. While it is possible to conduct this change in a revolutionary manner, as was done by Traum-Ferienwohnungen, which changed the entire system overnight, it is more common to perform the transformation as a step by step process.

> *"The kind of change depends on the organization. How robust is the organization? But there's also the question of how fast the change has to be conducted? A radical change can go wrong. It could tear the organization apart. That's a factor where one has to be sensitive."*[29]

---

[27] Translation by the author: „Also, wir arbeiten gerade bei einem großen Konzern, und bei denen, die haben gerade eine Task Force gegründet, von 25 Leuten, und wollen damit Agilität ins Unternehmen bringen. Das ist grundsätzlich schon mal eine gute Idee. Das kennt man auch als Best-Practice-Beispiel aus vielen anderen Unternehmen [...]." (Interview 3)

[28] Translation by the author: „Man sollte den Change-Prozess selber von unten mitgestalten lassen und die Mitarbeiter viel einbinden. Das bedarf Zeit und auch Ressourcen. Das macht die Umsetzung aber auch leichter." (Interview 4)

[29] Translation by the author: *„Welche Art des Changes ist von der Organisation abhängig. Wie ist die strapazierbar? Aber auch die Frage, wie schnell muss das gehen? Aber es hätte auch schiefgehen können und hätte die Organisation zerreißen können. Genau bei diesen Faktoren muss man sensibel sein."* (Interview 4)

Each of these steps brings the organization closer to self-organization; yet again, the autonomy of the employees remains clearly delimited throughout the different phases. It is a continuous process. There is continuous development, but in between, certain foundations must be established that create temporal stability.

> *"It is essential to understand the path towards self-organization as a stage process. The goal, self-organization, is defined. But it must be acknowledged that it is a tedious process."*[30]

This characterization of the process, which is derived from the cases as well as the interviews, is coherent with the research of theory. The expectation of fast results has commonly led to disappointment during the implementation of self-managing teams, as presented in Chapter 7.1.3. Similarly, fast results may not be achieved by the introduction of self-organization into the organization.

The change process requires guiding principles instead of concept blueprints.

During the interviews, the interviewed experts have argued that existing concepts of self-organization can work as orientation, but should not necessarily be implemented as a direct blueprint. The multitude of systems such as the Holacracy (see Chapter 3.1) provide complete frameworks that can be adopted, but from a conceptual point of view, they are criticized as being imposed on the organization.

> *„And this is the problem of self-organization methods […]. You can apply these methods, whether they are from Agility, the Scrum Process, or the Holacracy, […] they don't make you self-organized. You are replacing the hierarchy with a new system."*[31]

Each organization requires its individual adaptation of self-organization. It may, therefore, be more suitable to seek orientation along general principles, which have helped change drivers in the past. These principles are not exhaustive, and they vary between the different sources. Furthermore, they should be understood as guiding principles, not strict rules. These principles do not focus on the principles of a self-organizing organization, but on the principles guiding the change process.

---

[30] Translation by the author: *„Es ist wichtig den Weg hin zur Selbstorganisation als eine stufenweise Entwicklung zu verstehen. Es ist wichtig das Ziel, nämlich Selbstorganisation, zu definieren. Aber man muss auch anerkennen, dass es ein langwieriger Prozess ist."*(Interview 2)

[31] Translation by the author: „*Und das ist das Problem bei Selbstorganisation [...] Methoden, die du anwenden kannst, sei es aus Agilität, sei's aus dem Scrum Prozess, sei es aus der Holacracy, [...] die machen dich nicht selbst organisiert. Du tauschst eine Hierarchie gegen ein neues System aus."* (Interview 3)

Handing back decisions

Within the defined authorities given to an employee during a certain stage, decisions should not be taken from employees. While superior hierarchical levels may be consulted for advice, they should leave as many decisions as possible within the department or with the employees. Especially Ricardo Semler was constantly trying to reflect whether or not he took decisions away from those who were responsible. He argues that this principle was one of the main contributions to the success of the change process.

> *"[…] Over time [the agenda of executive meetings] shrank as everyone began to make more decisions. Themselves. People only brought up issues [for decision] they were genuinely unsure about. Even then, the group would often just throw the problem back into the person's lap. […] Mara [the marketing responsible] was told that she could publish brochures in whatever color she wanted, with whatever layout she wanted, and hire however many people her budget allowed to help"* (Semler, 1995, p. 83).

Meeting people eye-to-eye

Self-organization reintroduces, according to Semler, "common sense" or according to one expert "self-responsible working." This means that the human being, which has been eliminated by Taylor, is being reintroduced into the organization. To successfully work in self-organization and to be intrinsically motivated, employees need to be met at eye level. In line with Kant's moral imperative, employees should never be a mere means to an end, but must always be treated as an end in themselves. All processes within the organization should be redesigned accordingly.

Few rules and delimitations, but strictly applied

Abolishing all rules at once is not necessarily recommended. Especially during the transition, there are still rules and delimitations that are externally imposed,[32] for example, the determination of the current degree of autonomy and authority. While all rules that are perceived as disempowering are continuously being abolished, the rules that remain must be strictly applied.

[32] Also to some extent in the actual self-organization, but only a few of them are externally imposed.

"Simple rules applied with strictness instead of complicated rules applied without equality. Seneque used to say that the feeling of equality does not come from the severity of the laws but from the severity of their enforcement." (Zobrist, 2014, p. 69)

"You have to ask the question: How far am I willing to go? The frame of the self-organization must be clearly determined. Especially during the change process. There are aspects that, at that time, are not within the power of the self-organization to determine."[33]

Acknowledging and respecting people's fears and the past

The change process fundamentally questions how the organization has operated in the past. Power as well as positions and career opportunities are eliminated, which constitutes a loss in security for many employees. Employees may fear the loss of authority; others may fear the responsibility they are given.

Appropriate room must be given to people's concerns and fears. The challenge associated with the change must not be marginalized. Employees must be given a sense of security and to voice their concerns. This includes concerns regarding their careers and loss of power. Especially in an organization that has been successfully operating in the past, the formerly responsible employees must be appreciated, and it requires an extensive discourse to communicate why, under these circumstances, change is needed.

But acknowledging and giving room to employees' concerns does not mean that everybody in the organization must be catered to. It has to be accepted that the discourse may also result in people leaving the organization.

"The second learning [about the change process] was the acknowledgment of past efforts at the start of the transformation. The top performers within a system require appreciation and an extensive discourse as to why such a transformation is necessary for the organization's future success."

[33] Translation by the author: „Man muss auch die Frage stellen, wie weit will ich gehen? Der Rahmen der Selbstorganisation muss klar bestimmt werden. Besonders im Laufe des Change-Prozesses. Einige Dinge sind, zu diesem Zeitpunkt, nicht in der Macht der Selbstorganisation zu entscheiden." (Interview 2)

7.2.2 The Analytical Framework

The analysis of the expert interviews as well as the cases indicates that no analytical framework has so far established itself as a guiding principle for managers to analyze the organization during the transformation towards self-organization. Most experts pointed out, as has also been stated by Semler, that they were relying on and seeking inspiration from many different theories. Depending on the individual issue at hand, theories regarding human motivation, organizations, systems, etc. were used. But the experts mentioned some theoretical perspectives which may be especially useful during a transformation towards self-organization. These may serve as a perspective and provide a language for specific phenomena.

Spiral Dynamics by Beck and Cowan (1996): Especially useful for the analysis of different kind of organizational development stages. The different organizational stages help to understand the current organizational state in relation to other organizational states as well as the intended organizational state.

Theory X, Theory Y in McGregor (1987): Discussing the different assumptions regarding individual motivation. Theory X represents the assumption of the loathing worker, while Theory Y assumes that work represents an important source of satisfaction for human beings. The theories help to reflect back upon the assumptions, regarding human motivation, of those involved in the change process.

Cybernetics addresses the steering and regulation of systems such as machines or living organisms. Its sub-fields of organizational cybernetics and social cybernetics are of particular interest to organizations. Also, the **Sociological Systems Theory** as reformulated by Luhmann (1987) is considered valuable input for the understanding of complex systems and for taking a systems perspective on organizations.

7.2.3 The Interventions

In the different organizations, different interventions can be observed that serve similar purposes. These interventions can be observed in different phases of the change process. This is particularly the case during the change process of Semco, but similar interventions can be observed at FAVI and Traum-Ferienwohnung and are also recommended by the interviewed experts.

The 1st Phase

Showing trust: eliminating rules and control

From the analyzed cases and the expert interviews, it can be concluded that trusting your employees and showing them your trust is one of the most important initial steps during

the transformation. Trust can be shown through the loosening of control structures as well as through handing off authority. This step is initially challenging for the organizational leadership, but it offers the opportunity to make the change visible. These "symbolic actions" help to drive the desired changes, not just regarding processes but also in terms of organizational culture.

Semco's as well as FAVI's first change intervention was to abolish the most visible symbols of mistrust and control, the time clocking systems, locks on storage rooms and cabinets, etc. The working spaces were remodeled, and walls were torn down. At the same time, the windows overlooking the production facility were bricked up. But requirements regarding dress codes, etc. were also abolished.

> *"It is necessary to push people out of the 'you give - I give' relationship to lead them to have a concerted approach." FAVI*

Transferring work into team settings

A next important step was the transfer of working procedures into a team context. Work needed to be broken down into groups that were large enough to fulfill their working requirements but at the same time small enough to coordinate through direct interaction in the group. FAVI introduced autonomous work groups that are directly linked to a client. Each of these groups consists of 20-35 people. At Semco, these groups are called "manufacturing cells." Similar groups can be found at Traum-Ferienwohnungen. These teams are no longer gathered into functions but gathered according to products or customers.

> *"This means that, simply put, workers are no longer organized according to their activities but according to products. Traditional departments are omitted. Ideally, designers, programmers, customer support, and sales now all sit in one office."*[34]

These groups integrate the activities that were previously performed by dedicated support functions. But not only the support functions are integrated into the groups but also responsibilities that were previously held by middle management, such as planning and performance control.

[34] Translation by the author: *„Stark vereinfacht gesagt geht es darum, Mitarbeiter nicht mehr anhand ihrer Tätigkeiten, sondern entlang von Produkten zu organisieren. Klassische Abteilungen fallen weg, im Idealfall arbeiten dafür Designer, Programmierer, Support-Mitarbeiter und Vertriebler in einem Büro."* (Nicolaj Armbrust, founder of Traum-Ferienwohnungen, in (Halang, 2017))

Adapting the controlling, reporting and planning process

This early phase has also seen a significant change to the accounting systems especially at Semco and FAVI (no information is available on the other organizations). The accounting systems were significantly simplified. The planning horizons have been reduced to one short-term tactical planning horizon and one strategic horizon. In the case of Semco, these were 1/2-year and 5-year horizons.

Training provides people with the skills that are required for working in self-organization

Self-organizing organizations operate fundamentally differently from "traditional" organizations. In these "traditional" organizations, skills such as corporate politics or the knowledge of corporate rules and regulations have played a significant role. Self-organizing organizations instead rely on intensive face to face communication and discussion. Especially during the early phase of the transformation, this may represent a source of conflict. Due to the reintegration of the human into the organization, personal conflicts are now directly addressed. Especially the interviewed experts considered training a valuable contribution to a change process as it provides employees with the skills required to survive in the new environment. The analyzed research represents a similar view in Chapter 7.1.3, emphasizing the importance of training.

The introduction of regular check-ins before meetings may help to create a mutual understanding and acceptance between the different employees. It may also trigger a general change in the culture of the organization as it regularly also gives room to individual feelings and discusses interpersonal relationships. But employees must learn about such tools, understand how they work, and see how they improve the working environment.

Skills in non-violent communication, as well as conflict resolution and groups dynamics, may also prove valuable in a self-organizing context and may already have positive effects during the transition.

> *"Tools such as Non-Violent Communication are beneficial during such a process. But again, they must not be understood as a simple tool. They [these tools] directly intervene in the daily working life and in the reality of people."*[35]

[35] Translation by the author: *„Solche Tools wie GFK sind super hilfreich in so einem Prozess. Sie dürfen halt wieder nicht einfach als ein bloßes Tool missbraucht werden. Es greift direkt in den Arbeitsalltag und die Realität der Menschen ein."* (Interview 3)

Finally, personal coaching and individual conversations with employees also provide an opportunity to reflect on the change process, the individual situations, feelings and actions throughout the transformation.

The 2nd Phase

The second phase initiates additional fundamental changes to the working processes such as introducing a transparency of information as well as the sharing of profits. During this phase, one of the main obstacles is the resistance by middle management and some parts of the support functions. Throughout this phase, it seems particularly important to continuously communicate the principles of the new system to all workers. Especially those parts of the organizational leadership that are already familiar with the new principles must engage in a constant exchange with workers of all levels, encouraging decision making, supporting their initiatives, and communicating the new values of the organization. At Semco, regular lunches between the organizational leadership and workers were used as a way to gain feedback on the change process and to communicate the new organizational philosophy.

Creating information transparency to enable autonomous decision making

As previously stated, autonomous and educated decisions can only be made if the information is available. This is especially true since more and more autonomy is given to the work groups, including decisions that exceed the tactical planning and may have strategic character. Groups, as well as individuals, therefore require information beyond their work group. This may include all information regarding the organizational performance or information regarding the performance of other work groups. This information transparency not only enables educated decision making but also creates a mechanism of control and awareness for underperformance that fills the void regarding oversight and accountability which is generated by the abolishment of hierarchical control. For example, if it becomes apparent that one work group significantly underperforms, other groups may, on the one hand, ask for the reasons, and on the other hand, they can also offer help and insights. At Semco, even information regarding the structure of salaries was made accessible in pursuit of a general principle of transparency and openness.

> *"No one can expect the spirit of involvement and partnership to flourish without an abundance of information available even to the most humble employee. […] The advantages of openness and truthfulness far outweigh the disadvantages." (Semler, 1995, p. 136)*

Removing middle management and support functions

The conflict that naturally occurs with middle management is commonly one of the most significant challenges within the transformation towards self-organization. This conclusion is coherent with the existing theory, in particular statements made by Sims and Manz (1986). Middle managers are stripped of their power and authority and are therefore likely the most active opponents to the change process. Middle managers become partially redundant and consequently unproductive. There are multiple approaches to addressing this challenge.

Throughout the years, FAVI slowly phased out its middle management. Those who retired were not replaced. Those managers who remained in the organization were given the opportunity to find new challenges and occupations within the self-organization. They were transformed/promoted into expert roles and to advisors who were supporting the mini-factories. Their salaries were maintained. This approach has proven successful in overcoming middle-management's resistance and is in line with the recommendations made by Manz and Sims in the research of theory, as shown in 7.1.3. Also at Traum-Ferienwohnungen, managers were given opportunities to find a new occupation within the organization, while their salaries remained untouched.

The change process at Semco was more radical. Middle managers kept their salaries, but those who were not part of the executive work group created later were transferred into regular positions which lacked power and status. Throughout the process, most of the middle management left Semco.

Introducing profit sharing

> *"Participation gives people control of their work, profit sharing gives them a reason to do it better, information tells them what's working and what isn't." - Ricardo Semler in (Killian, Perez and Siehl, 1998, p. 4)*

Intrinsic motivation and the satisfaction of higher order needs, such as self-actualization, is very rewarding. But it is difficult to maintain this motivation if the rewards remain intangible. Money is still a very effective way to communicate success, failure and also appreciation. Through the introduction of profit sharing, the individual interest is linked to the collective action. At both Semco and FAVI, a form of profit sharing has been introduced. At the latter, profits had always been shared due to agreements with the labor unions, but the way profits were shared have been changed. Profits are now distributed equally among all employees and only adjusted to the presence time of employees and therefore disregarding their base salary and position or role. A similar procedure is commonly used at Semco. At Semco, a predetermined percentage of profits (23 %), after taxes, dividends, and reinvestments, is dedicated to the profit sharing program. Workers self-determine the structure of

the profit sharing each year. After initial experimentation, they have settled on an equal distribution between all workers, similar to FAVI.

The 3rd Phase

Removing hierarchies and remaining support functions

From the case studies, it can be concluded that the interventions conducted during the third phase of the transformation aim to further liberate the work groups. This includes the elimination of most or all hierarchical levels. In the case studies, a certain degree of hierarchy has been maintained. At Semco, employees were transferred into circles, but different levels were maintained and therefore also managerial functions. At FAVI, through the elimination of middle managers, the hierarchical levels have been reduced to two: operators and their leaders. FAVI therefore focused in particular on the elimination of the remaining support functions, especially those that were interfering with the autonomy of the "mini-factories." At Semco, support functions had already been drastically reduced. For example, the human resources department had been reduced from thirty to two employees.

7.3 Limitations of the Study

The limitations of this study and of the just presented results are caused by the methodological and practical choices. This research therefore exhibits the common limitations of qualitative research. The findings cannot be extended and applied to other organizations with the same degree of certainty (Atieno, 2009, p. 17).

Due to the practical choices, such as the selection of cases as well as the individual emphasis of the interviews, some phenomena of the change process may have remained unnoticed, were given less attention, or were overemphasized. The combination of different cases, sources, and interviews can only mitigate this bias to a limited degree due to the overall small sample size. Until this initial proposition has been tested, they should be understood to provide an initial understanding as their practical implications remain limited.

8 Summary and Opportunities for Future Research

Self-organizing has become an interesting organizational paradigm for many of today's practitioners. While the workings of self-organizing organizations have been described in many case studies and synthesized in popular management literature, all those who consider transforming their organization towards this new organizational paradigm were left without any theory or insights into how such a change can be conducted.

This study set out to explore the change process of organizations towards self-organization. This exploration has been conducted according to the five elements determined by Dunphy and Griffiths (1994) required for a comprehensive change theory. First insights regarding each of these elements have been established in this study.

Chapter 5.1 has described through a historical analysis how many of today's organizations can be characterized as human bureaucracies, providing the starting point of the change process required by the change framework. In Chapter 5.2, the principles of self-organizing systems have been adopted from the natural sciences to organizations, constructing an initial description of the fundamental character of such self-organizing organizations and determining the aimed for status of the organization.

In Chapters 7.1 this study has analyzed existing theory and 0, it has analyzed the cases and interviews that were created and conducted, to determine how to implement the change between these two organizational models. In Chapter 7.2.1, the role of the change driver during such a transformation has been described. It has been learned that the transformation into self-organization is often decided by the top management, but designed and guided with the involvement of the employees. Furthermore, it has been shown that the change process is a long and iterative process, which requires the continuous adaption of plans and practice and that such a change should be guided by principles instead of predetermined frameworks.

7.2.2 has presented the use of analytical frameworks in the change process. It was demonstrated that there is no particular analytical or theoretical framework that guides the change. Instead, the change driver commonly seeks inspiration from many different sources. Still, some theoretical and analytical frameworks are helpful in understanding the organization and communicating the change.

Finally, Chapter 7.2.3 presents the interventions that are applied during the transformation. These interventions can be distinguished into three phases. During the first phase, symbolic actions are taken, abolishing control and showing trust towards the employees. Moreover, this first phase is commonly characterized by a structural transformation that organizes work into work teams, consisting of employees with diverse backgrounds, dedicated to

specific clients or tasks. The second stage primarily addresses the removal of middle management and of support functions. This is considered one of the core challenges of this transformation. Also, the creation of information transparency and the introduction of profit sharing plans is an important intervention during the second phase. Lastly, the third phase primarily addresses the reduction of the remaining hierarchies and the elimination of the remaining management and support functions.

As established, through the methodology in Chapter 6.1 and as highlighted in Chapter 7.3, these results aim to create an initial understanding of the change process. They should be considered initial propositions and are not meant to be generalizable or seen as valid. The exploratory research is the first step of many studies that are required to fully understand the phenomenon of self-organizing organizations and the change process that is required if an organization intends to adopt this organizational concept:

Following the recommendations given by Dul and Hak (2008) an initial theory testing, based on the propositions made in this study, is required. The initial testing then needs to be followed by a replication of the results in order to enhance the applicability and generalizability of the propositions.

In addition, these insights need to be recontextualized with the existing literature and change theories. It is likely that a number of the current change frameworks are capable of encompassing some of the phenomena that have been discovered. With the creation of such a connection, existing knowledge can be connected to the change process of organizations towards self-organization.

Finally, the characterization of the self-organizing organization, which in this study has only been rudimentarily adopted and exemplified, can be specified and verified through the systematic application of additional cases of self-organizing organizations, of which there are many.

9 List of Sources

Abercrombie, N., Hill, S., & Turner, B. . (1984) *Penguin Dictionary of Sociology*. Penguin Books.

Adorno, T. W. and Horkheimer, M. (1972) *Dialectic of Enlightenment*. Edited by J. Cumming. New York: Continuum.

Anzola, D., Barbrook-Johnson, P. and Cano, J. I. (2017) 'Self-organization and social science', *Computational and Mathematical Organization Theory*. Springer US, 23(2), pp. 221–257.

Atieno, O. P. (2009) 'An analysis of the strengths and limitation of qualitative and quantitative research paradigms', *Problems of Education in the 21st Century*, 13, pp. 13–18. Available at: http://www.scientiasocialis.lt/pec/files/pdf/Atieno_Vol.13.pdf.

Balogun, J. and Hailey, V. H. (2004) *Exploring strategic change*, *Pearson Education*.

Banai, M., Nirenberg, J. and Menachem, M. (2000) 'Leadership in Self-Managing Organizations: Orpheus and a Date Plantation', *Journal of Leadership & Organizational Studies*, 7(3), pp. 3–17. Available at: http://jlo.sagepub.com.ezp.waldenulibrary.org/content/7/3/3%5Cnhttp://jlo.sagepub.com.ezp.waldenulibrary.org/content/7/3/3.full.pdf.

Beck, D. and Cowan, C. C. (1996) *Spiral dynamics : mastering values, leadership, and change : exploring the new science of memetics*, *Developmental management*. doi: 10.1007/s13398-014-0173-7.2.

Bennis, W. G. (1967) 'The Coming Death of Bureucracy', *Journal of Occupational and Environmental Medicine*, 9(7), p. 380.

Bernstein, E. (2016) 'The Zappos Holacracy Experiment', *Harvard Business Review*. Available at: https://hbr.org/ideacast/2016/07/the-zappos-holacracy-experiment.html.

Bernstein, E., Bunch, J., Canner, N. and Lee, M. (2016) 'Beyond the Holacracy Hype: The overwrought claims—and actual promise—of the next generation of self-managed teams', *Harvard Business Review*, 94(7), pp. 38–49.

Bogner, A. and Menz, W. (2009) 'The Theory-Generating Expert Interview: Epistemological Interest, Forms of Knowledge, Interaction', *Interviewing Experts*, (July), pp. 43–81. doi: 10.1057/9780230244276.

Boje, D. M. and Winsor, R. D. (1993) 'The Resurrection of Taylorism: Total Quality Management's Hidden Agenda', *Journal of Organizational Change Management*, 6(4), pp. 57–70. doi: 10.1108/09534819310042740.

Browker, G. C. and Star, S. L. (2000) *Sorting Things Out: Classification and its Consequences*. First MIT. Cambridge, Massachusetts; London, England: Massachusetts Institute of Technology.

Bruce, S. and Yearley, S. (2006) *The Sage Dictionary of Sociology*. London, Thousand Oaks, New Delhi: SAGE Publications Ltd.

Burnes, B. (2005) 'Complexity theories and organizational change', *International Journal*

of Management Reviews, 7(2), pp. 73–90. doi: 10.1111/j.1468-2370.2005.00107.x.

Burnes, B. (2017) *Managing change*, *A strategic approach to organisational dynamics*.

By, R. T. (2005) 'Organisational change management: A critical review', *Journal of Change Management*, 5(4), pp. 369–380. doi: 10.1080/14697010500359250.

Cabana, S. (1995) 'Can People Restructure Their Own Work', *Target*, 11(6), pp. 16–30.

Carter, E. E. (1971) 'The behavioral theory of the firm and top-level corporate decisions', *Administrative Science Quarterly*, 16(4), pp. 413–429. doi: 10.2307/2391762.

Cockburn, A. and Highsmith, J. (2001) 'Agile software development: The people factor', *Computer*, 34(11), pp. 131–133. doi: 10.1109/2.963450.

Cohen, S. G. and Ledford, G. E. (1994) 'The Effectiveness of Self-Managing Teams: A Quasi-Experiment', *Human Relations*, 47(1), pp. 13–43. doi: 10.1177/001872679404700102.

Corbin, J. and Strauss, A. (1990) 'Grounded Theory Research: Procedures, Canons and Evaluative Criteria', *Zeitschrift für Soziologie*, 19(6), pp. 418–427.

Davenport, T. H. (2005) *Thinking for a Living*. Boston,Massachusetts: Harvard Business School Press.

Dietrich, A. (2001) *Selbstorganisation: Management aus ganzheitlicher Perspektive*. Wiesbaden: Springer.

Doty, D. H. and Glick, W. H. (1994) 'Typologies As a Unique Form Of Theory Building: Toward Improved Understanding and Modeling', *Academy of Management Review*, 19(2), pp. 230–251. doi: 10.5465/AMR.1994.9410210748.

Drucker, P. F. (1999) 'Knowledge-Worker Productivity: The Biggest Challenge', *California Management Review*, 41(2), pp. 79–94. doi: 10.1109/EMR.2006.1679053.

Dul, J. and Hak, T. (2008) *Case Study Methodology in Business Research*. Elsevier Ltd.

Dunphy, D. (1996) 'Organizational change in corporate settings', *Human Relations*, 49(5), pp. 541–552. doi: 10.1177/001872679604900501.

Dunphy, D. and Griffiths, A. (1994) 'Theories of organisational change as models for intervention'. Centre for Corporate Change, Australian Graduate School of Management, in the University of New South Wales, pp. 1–32.

Edmondson, A. C. and Mcmanus, S. E. (2007) 'Methodological Fit in Management Field Research', *Academy of Management Review*, Vol. 32(4), pp. 1155–1179. Available at: http://users.business.uconn.edu/jgoodman/MGMT 6201 Assigned Readings 2008/1 Theory and research design/Edmondson and McManus 2007 .pdf.

Edmondson, A. C. and Mcmanus, S. E. (2007) 'Methodological Fit in Management Field Research', *Academy of Management Review*, 32(4), pp. 1155–1179.

Ezzamel, M., Willmott, H. and Worthington, F. (2008) 'Manufacturing shareholder value: The role of accounting in organizational transformation', *Accounting, Organizations and Society*, 33(2–3), pp. 107–140. doi: 10.1016/j.aos.2007.03.001.

Flory, M. (2005) 'Management fads : the case of the self-managed team', 12(3), pp. 275–282. doi: 10.1108/14635770510600384.

Gilbert, N., Anzola, D., Johnson, P., Elsenbroich, C., Balke, T. and Dilaver, O. (2015) *Self-Organizing Dynamical Systems*. Second Edi, *International Encyclopedia of the Social &*

Behavioral Sciences (Second Edition). Second Edi. Elsevier. doi: https://doi.org/10.1016/B978-0-08-097086-8.43086-2.

Gilbert, P., Crozet, N. and Tegelborg, A.-C. (2013) 'Work Organisation and Innovation - Case Study: FAVI, France', *International Publications*, p. 15.

Glaser, B. G. and Strauss, A. L. (1967) *The Discovery of Grounded Theory: Strategies for Qualitative Research*, *Observations*. doi: 10.2307/2575405.

Graetz, F. (2000) 'Strategic change leadership', *emeraldinsight.com, Management decision, Vol. 38 Iss: 8*, 8, p. pp.550-564. Available at: http://www.emeraldinsight.com/journals.htm?articleid=865171&show=abstract.

Grey, C. (2009) *A Very Short, Fairly Interesting and Reasonably Cheap Book About Studying Organizations*. 2nd editio. London: Sage.

Grinyer, P. H. and Norburn, D. (1975) 'Planning for existing markets: Perceptions of executives and financial performance', *Journal of the Royal Statistical Society*, 138(1), pp. 70–97. doi: 10.2307/2345251.

Grobman, G. M. (2005) 'Complexity theory: A new way to look at organizational change', *Public Administration Quarterly*, 29(3/4), pp. 351–384.

Halang, V. (2017) *Ein Unternehmen wie ein Löwenrudel*, *enorm-magazin.de*. Available at: https://enorm-magazin.de/ein-unternehmen-wie-ein-loewenrudel (Accessed: 16 November 2017).

Hamel, G. (2011) 'First, let's fire all the managers', *Harvard Business Review*, (December). Available at: https://hbr.org/ideacast/2011/11/fire-all-the-managers.html.

Hamel, G. and Zanini, M. (2014) 'Top-Down Solutions Like Holacracy Won't Fix Bureaucracy', *Harvard Business Review*, pp. 2–5.

Hoda, R., Noble, J. and Marshall, S. (2010) 'Organizing Self-Organizing Teams', *32nd ACM/IEEE International Conference on Software Engineering (ICSE 2010)*, pp. 285–294. Available at: http://homepages.mcs.vuw.ac.nz/~elvis/twikipub/Main/RashinaHoda/OSOT.pdf.

Holland, J. H. (1995) *Hidden Order: How Adapation Builds Complexity*.

Jobidon, M.-E., Turcotte, I., Aube, C., Labrecque, A., Kelsey, S. and Tremblay, S. (2016) 'Role Variability in Self-Organizing Teams Working in Crisis Management', *Small Group Research*, 48(1), p. forthcoming. doi: 10.1177/1046496416676892.

Van de Kamp, P. (2014) 'Holacracy – a Radical Approach to Organizational Design', *Elements of the Software Development Process - Influences on Project Success and Failure*, (April 2014), pp. 13–25. doi: 10.13140/2.1.3740.8645.

Kelso, J. A. S. (2001) 'Self-organizing Dynamical Systems', in *International Encyclopedia of the Social & Behavioral Sciences*, pp. 13844–13850. doi: http://dx.doi.org/10.1016/B0-08-043076-7/00568-4.

Kerber, K. and Buono, A. F. (2005) 'Rethinking Organizational Change: Reframing the Challenge of Change Management', *Organization Development Journal*, 23(3), pp. 23–38.

Kiechel, W. (2012) 'The management century', *Harvard Business Review*, 90(11).

Kieser, A. (1994) 'Why Organization Theory Needs Historical Analyses--And How This Should Be Performed', *Organization Science*, 5(4), pp. 608–620. doi:

10.1287/orsc.5.4.608.

Killian, K., Perez, F. and Siehl, C. (1998) 'Ricardo Semler and Semco S.A.', *HBR Case Study*, 44, p. 12. Available at: http://scholar.google.com/scholar?hl=en&btnG=Search&q=intitle:Ricardo+Semler+and+Semco+S.A+.#0%5Cnhttp://scholar.google.com/scholar?hl=en&btnG=Search&q=intitle:Ricardo+Semler+and+Semco+S.A.#0.

Kroeber, A. L. (1968) *Anthropology: Culture, Patterns & Processes*. New York and London: Harbest/HBJ.

Kulesza, M. G., Weaver, P. Q. and Friedman, S. (2011) 'Frederick W. Taylor's presence in 21st century management accounting systems and work process theories.', *Journal of Business & Management*, 17(1), pp. 105–119. doi: 10.1080/10130950.2015.1012859.

Kurian, G. T. (2013) *The AMA dictionary of business and management*, *Dictionary of business and management*. New York et al.: American Management Association.

Laloux, F. (2014) *Reinventing Organizations*, *A Guide to Creating Organizations Inspired by the Next Stage of Human Consciousness*. doi: 10.15358/9783800649143.

Lewin, K., Cartwright, D. and Price, D. (1951) 'Field Theory in Social Science: Selected Theoretical Papers.', *American Sociological Review*, 16(3), p. 404. doi: 10.1037/0021-9010.69.1.85.

Luhmann, N. (1987) *Soziale Systeme - Grundriß einer allgemeinen Theorie*, *Contemporary Sociology*. Suhrkamp Taschenbuch. doi: 10.2307/2070383.

Maguire, S. and McKelvey, B. (1999) 'Complexity and Management : Moving From Fad To Firm Foundations', *Emergence*, 1(2), pp. 1–19. doi: 10.1207/s15327000em0102_3.

Manz, C. C. (1992) 'Self-Leading Work Teams: Moving Beyond Self-Management Myths', *Human Relations*, 45(11), pp. 1119–1140. doi: 10.1177/001872679204501101.

Manz, C. C., Shipper, F. and Stewart, G. L. (2009) 'Everyone a Team Leader:. Shared Influence at W. L. Gore & Associates', *Organizational Dynamics*, 38(3), pp. 239–244. doi: 10.1016/j.orgdyn.2009.04.006.

Manz, C. C. and Sims, H. P. (1986) 'Leading Self-managed Groups: A Conceptual Analysis of a Paradox', *Economic and Industrial Democracy*, 7, pp. 141–165. doi: 10.1177/0143831X8672002.

Manz, C. C. and Sims, H. P. (1993) *Business Without Bosses - How Self-Managing Teams Are Building High-Performing Companies*.

Manz, C. C. and Sims Jr., H. P. (1980) 'Self-Management as a Substitute for Leadership: A Social Learning Theory Perspective', *Academy of Management Review*, 5(3), pp. 361–368. doi: 10.5465/AMR.1980.4288845.

Maslow, A. H. (1943) 'A theory of human motivation.', *Psychological Review*, 50(4), pp. 370–396. doi: 10.1037/h0054346.

Mayring, P. (1983) *Qualitative Inhaltsanalyse: Grundlagen und Techniken*. 12., übera, *Grundlagen und Techniken*. 12., übera. Weinheim [u.a.]: Beltz. doi: 10.1007/978-3-8349-9441-7.

Mayring, P. (2000) 'Qualitative Inhaltsanalyse Philipp Mayring', *Forum Qualitative Sozialforschung*, 1(2), pp. 1–10. Available at: http://www.springerlink.com/index/Q74U418433VJ0941.pdf.

McCracken, G. (2011) ‘In: The Long Interview’, in *The Long Interview*. Newbury Park Print: SAGE Publications, Inc., pp. 9–11.

McCutcheon, D. D. M. and Meredith, J. R. (1993) ‘Conducting case study research in operations management’, *Journal of Operations Management*, 11(3), pp. 239–256. doi: 10.1016/0272-6963(93)90002-7.

McGregor, D. (1987) *The The Human Side of Enterprise*. Middlesex: Penguin Books. doi: 10.5465/AMR.2004.12736104.

Mckelvey, B. (1999) ‘Complexity theory in organization science: Seizing the promise or becoming a fad?’, *Emergence*, 1(1), pp. 1–10.

Medeiros, J. A. (1977) *Public bureaucracy: Values and perspectives*. Duxbury Press.

Merkle, J. A. (1980) *Management and Ideology: the legacy of the international scientific management movement*.

Mitleton-Kelly, E. (2003) ‘Ten Principles of Complexity & Enabeling Infrastructure’, in *Complex Systems and Evolutionary Perspectives on Organisation: The Application of Complexity Theory to Organisations*.

Morgan, G. (1980) ‘Paradigms, Metaphors, and Puzzle Solving in Organization Theory’, *Administrative Science Quarterly*, 25(4), p. 605. doi: 10.2307/2392283.

Mullins, J. W. and Jorgensen, K. (2007) ‘Discovering “ Unk-Unks ”’, (48410).

Myint, M. K. (1997) ‘Bureaucracy : problems and strategies for overcoming it’, *ABAC Journal*, 17(2).

Pfeffer, J. (1993) ‘Barriers to the Advance of Organizational Science: Paradigm Development as a Dependent Variable’, *The Academy of Management Review*, 18(4), p. 599. doi: 10.2307/258592.

Porr, B. (2002) *Systemtheorie und Naturwissenschaft*. Wiesbaden: Deutscher Universitätsverlag. doi: 10.1007/978-3-322-81276-6.

Purser, R. E. and Cabana, S. (1998) *The Self-Managing Organization - How leading companies are transforming the work of teams for real impact*. The Free Press.

Robinson, K. M. (2001) ‘Unsolicited narratives from the Internet: a rich source of qualitative data.’, *Qualitative health research*, 11(5), pp. 706–714. doi: 10.1177/104973201129119398.

Roelofsen, E. and Yue, T. (2017) *Is Holacracy for us? A Global Construction Company Weighs the Risk of Extreme Decentralizaton*.

Scarbrough, H. (1999) ‘Knowledge as Work : Conflicts in the Management of Knowledge Workers’, (May 2016). doi: 10.1080/095373299107546.

Schoemaker, M. and Jonker, J. (2005) ‘Managing intangible assets’, *Journal of Management Development*, 24(6), pp. 506–518. doi: 10.1108/02621710510600964.

Seidman, I. (2006) *Interviewing as qualitative research: A guide for researchers in education and the social sciences*, *Social Sciences*. doi: 10.1037/032390.

Semler, R. (1995) *Maverick: The Success Story Behind the World’s Most Unusual Workplace*. New York, Boston: Hachette Book Group.

Shipper, F. and Manz, C. C. (1992) ‘Employee Self-Management Without Formally Designated Teams: Alternative Road to Empowerment’, *Organizational Dynamics*, 20(3),

pp. 48–61.

Shoemaker, S., Harman, G., Hollis, M., Jackson, F., Lear, J., Perry, J. and Stroud, B. (1988) *The Theory and Practice of Autonomy*. 2008th edn. Cambridge: Cambridge University Press.

Simon, F. B. (2015) *Einführung in die Systemische Organisationstheorie*. Heidelberg: Carl-Auer Systeme Verlag und Verlagsbuchhandlung GmbH.

Stebbins, R. (2001) 'What Is Exploration?', in *Exploratory Research in the Social Sciences*. Thousand Oaks: SAGE Publications, Inc., pp. 2–18. doi: 10.4135/9781412984249.

Stebbins, R. A. (2011) 'Exploring', in *Exploratory Research in the Social Sciences*, pp. 13–30. doi: 10.4135/9781412984249.

Swaab, R. I. (2014) 'Ricardo Semler : A Revolutionary Model of Leadership', *HBR Case Study*, 44(0), pp. 0–12.

Tampoe, M. (1993) 'Motivating knowledge workers-The challenge for the 1990s', *Long Range Planning*, 26(3), pp. 49–55. doi: 10.1016/0024-6301(93)90006-2.

Taylor, F. W. (1911) *The Principles of Scinetific Management*. 2016th edn. Cosimo Classics.

Tharumarajah, A. (2003) 'A self-organising view of manufacturing enterprises', *Computers in Industry*, 51(2), pp. 185–196. doi: 10.1016/S0166-3615(03)00035-6.

The Economist (2015) 'Digital Taylorism', *The Economist*, pp. 3–5. doi: http://dx.doi.org/10.1108/17506200710779521.

Thibodeaux, M. S. and Faden, S. K. (1994a) 'Organizational design for self-managed teams', *Industrial Management & Data Systems*, 94(10), pp. 20–25. doi: 10.1108/02635579410073495.

Thibodeaux, M. S. and Faden, S. K. (1994b) 'Organizational Design for Teams', *Industrial Management & Data Systems*, 94(10), pp. 20–25.

Thiétart, R. A. and Forgues, B. (1995) 'Chaos Theory and Organization', *Organization Science*, 6(1), pp. 19–31.

Ticoll, D. (2004) 'Get self-organized', *Harvard Business Review*, 82(9), p. 18–19+134. doi: Article.

Trist, E. (1980) 'The Evolution of socio-technical systems: a conceptual framework and action research program', *Conference on Organizational Design and Performance*, pp. 1–67. doi: 0-7743-6286-3.

Trist, E. and Bamforth, K. (1951) 'The Filling Shift in the Semi-Mechanized Longwall Three-Shift Mining Cycle', (1), pp. 1–17. Available at: http://www.moderntimesworkplace.com/archives/ericsess/sessvol2/Trist___Bamforth_1.pdf.

Uden, J. Van (2005) 'Complexity and Philosophy Using complexity science in organization studies: A case for loose application', *E:CO Emergence: Complexity and Organization*, 7(1), pp. 60–66.

Vermaas, P., Kroes, P., van de Poel, I., Franssen, M. and Houkes, W. (2011) *A Philosophy of Technology: From Technical Artefacts to Sociotechnical Systems*, *Synthesis Lectures on*

Engineers, Technology and Society. doi: 10.2200/S00321ED1V01Y201012ETS014.

Volberda, H. W. (1999) 'Building the Flexible Firm', *Oxford University Press, Oxford.* doi: 10.1093/acprof:oso/9780198295952.001.0001.

Wageman, R. (1997) 'Critical Success Factors for Creating Superb Self-Managed Teams', *Organisational Dynamics*, 26(1), pp. 49–61. doi: 10.1016/S0090-2616(97)90027-9.

Walton, R. E. (1972) 'How to counter alienation in the plant.', *Harvard Business Review*, 50(6), pp. 70–81. Available at: http://search.ebscohost.com/login.aspx?direct=true&db=buh&AN=3867025&site=ehost-live.

Weber, M. (1920) *The Protestant Ethic and the Spirit of Capitalism*, *Penguin*. Available at: http://www.mipan.info/pdf/ethic/6.pdf.

Weber, M. (1922) *Wirtschaft und Gesellschaft*, *J.C.B. Mohr*.

Weber, M. (1978) 'Economy and Society.', *New York*, p. 1469. doi: 10.2307/2091965.

Weber, M. (1999) *Gesammelte Aufsätze zur Wirtschaftslehre*. Edited by E. Flitner. Potsdam: Institut für Pädagogik der Universität Potsdam. Available at: http://verlag.ub.uni-potsdam.de/html/494/html/WL.pdf.

Weick, K. E. and Quinn, R. E. (1999) 'Organizational Change and', *Annual Review of Psycholgy*, 50, pp. 361–386. doi: 10.1146/annurev.psych.50.1.361.

Windsor, D. (2003) 'Change management competencies for creating collaborative organizations', *Advances in Interdisciplinary Studies of Work Teams*, 9, pp. 31–65. doi: doi:10.1016/S1572-0977(02)09005-2.

Wren, D. a (2011) 'The Centennial of Frederick W. Taylor's The Principles of Scientific Management: A Retrospective Commentary.', *Journal of Business & Management*, 17(1), pp. 11–22. Available at: http://search.ebscohost.com/login.aspx?direct=true&db=buh&AN=79274944&lang=fr&site=ehost-live.

Wren, D. A. (1972) *The Evolution of Management Thought*. New York: The Ronal Press Company.

Zobrist, J.-F. (2014) *La Belle Histoire de Favi: L'Entreprise Qui Croit Que L'Homme Est Bon*, *World*. Paris: Humanusme & Organisation. doi: 10.1109/MAHC.2015.67.

Appendix

Appendix A: Example of the analysis procedure:

In the following, examples of the coding hierarchy, the coding scheme and of a synthetization are provided.

Example of the coding hierarchy

Main Category	Subcategory	Sub-Subcategory
1. Change Driver	1.1. Change Reason	1.1.1 Effects of Bureaucracy
		1.1.2 Assumption regarding human motivation
	1.2. Change Plan	1.2.1 …

Example of the Coding Scheme

Code	Category	Definition	Reference Example	Rule
1.1.	Change Reason	The reason that led to the decision to conduct the change towards self-organization.	"At that time, employees were clocking in and out and received sanctions for any delay. But I was dreaming of a company where everyone would naturally respect the working hours without a bell or control."	All elements that contain information regarding the motivation and reasoning behind the decision to conduct the change towards self-organization

Example a Synthetization

Quote	Synthesis
"At that time, employees were clocking in and out and received sanctions for any delay. But I was dreaming of a company where everyone would naturally respect the working hours without a bell or control."	Envisioned an organization that is guided by responsibility instead of control.

Appendix B: Interviews

The following table provides an overview over the interviews that have been conducted in the course of this research:

Interview	Recording	Contact	Background
Interview I	Notes + Memory Protocol	In person	Currently in trans-formation
Interview II	Notes + Memory Protocol	In person	Interested in trans-forming
Interview 1	Audio Recording + Notes	In person	Experienced a change process
Interview 2	Notes + Memory Protocol	In person	Change driver and consultant
Interview 3	Audio Recording + Notes	In person	Change consultant
Interview 4	Notes + Memory Protocol	Via phone	Change driver and consultant

Appendix C: Semco: A Case Illustration of a Transformation to Self-Organization

> *"If you want my advice, take a deep breath, pluck up your courage, and feed the policy manual to the shredder, one page at a time. Let companies be ruled by wisdom that varies from factory to factory and worker to worker." (Semler, 1995, p. 97)*
>
> *- Ricardo Semler*

The case of Semco, a private Brazilian company, is likely one of the best-documented cases describing an organization's transformation towards a form of self-organization. Before Ricardo Semler started to manage the company, Semco was organized more autocratically than many other companies at that time. Especially in European companies, the involvement of workers in the organizational decision making was a common practice. But throughout the change process, Semco far exceeded this participation and transformed into an almost entirely self-organized enterprise.

Introduction

Semler & Company was founded in the 1950s by Antonio Curt Semler. During the first Brazilian "economic miracle," he built the company into one of the major suppliers of pumps for the shipbuilding industry. It was a company that, like many others in those years, was structured as a hierarchical bureaucracy led by an autocratic leader. During the early 1980s, Ricardo, Antonio's son, joined the company. It was at a time when the "economic miracle" ended, and the Brazilian shipbuilding industry was hit hard by economic recession. The effects on Semler & Company were especially hard as the company derived 90 % of its revenue from the Brazilian shipbuilding industry.

Ricardo, who was one of the youngest MBA graduates ever from Harvard, was convinced that the survival of the company depended on diversification. But neither his father nor anyone else in the company paid attention to his recommendations. Only after Ricardo threatened to leave the family business and Antonio saw his succession in jeopardy, did he hand over the business to his son Ricardo, then 21 years old.

Ricardo was of the opinion that a fast radical change was required to turn the company around. One Friday afternoon, shortly after taking over the company, Ricardo fired 60 % of Semco's top management and hired a new senior manager, Sorocaba Ernesto. Ernesto introduced new procedures, tightened control over managers and workers, establishing a new department for planning and control (Semler, 1995, p. 15,25). Through the improvements in operational efficiency and new license agreements, in 1982, Semco was earning money again, allowing Semler to diversify and acquire new companies.

In 1984, Semco acquired the Hobart plant from Darft & Kraft, which produced a wide range of different products, such as Duracell batteries, Tupperware containers, dishwashers, fryers, scales, slicers. It was unprofitable but fitted perfectly into the diversification strategy of Semco. One of Semco's senior managers, Fernando, was convinced that this company could be brought back on track if new processes and controls were implemented. Fernando enhanced the procedures, changed prices, sold machines, bought new ones, fired employees for a perceived lack of motivation or competence, and started tracking all elements of the business (pp. 45-52).

But this enhancement of control led to increased tensions between Fernando and the local plant management who perceived the former as overbearing and tyrannical. This resulted in an open conflict during one of the annual corporate retreats.

This confrontation led Semler to the realization that there was a deep divide between those in the organization who believed in law, order, and organization and those who believed that people, motivated by a sense of involvement, would be happier and more efficient (pp. 51-57).[36]

The First Wave of Change

One of the initial steps in the change process was to simplify the accounting system at Semco, reducing the number of cost centers, and eliminating many of the documents that were circulated and needed to be signed. "Our new system was simpler, with limited but relevant data." (p. 64) The budgeting was simplified and reduced to one half-year-plan, which would be relevant for operational considerations, and a five-year-plan, which would be relevant for the strategic view. The monthly financial reporting was limited to the most significant numbers. "Simplifying our budget process didn't solve all our problems. But it did help us see them more clearly." (p. 65)

One of the core problems was that employees were avoiding responsibility while at the same time defending their perceived turf, resulting in a lack of cooperation. A variety of efforts was undertaken to change this behavior but without lasting effect. It seemed as if the problems at Semco were more significant than expected by Semler. He related the unwillingness of employees to take responsibility for the general attitude that was conveyed towards the worker: that workers could not be trusted and that systems were required to control these workers.

[36] It was at this time that the stress from the turnaround of Semco affected Ricardo Semler personally. He collapsed during a factory visit in the U.S. His doctor diagnosed him with an advanced case of stress, and he was advised by doctors to change his life. Ricardo Semler realized that it was time to make significant changes. Not just to his own life, but to the way work was organized at Semco (pp. 57-59).

> *"Yet at Semco, the system was dispiriting and demotivating them. So, I thought to myself, why not start by eliminating some of the most visible symbols of corporate oppression." (p. 67)*

The control mechanisms that had been introduced by Fernando were removed, especially the daily searches of workers at the factory exits. Surprisingly, the elimination of controls was initially resisted by the unions. They feared that honest workers could be under suspicion if tools disappeared, and the searches were seen as an opportunity to prove their innocence. Semler posted a sign at the gate that read:

"PLEASE MAKE SURE AS YOU LEAVE THAT YOU ARE NOT
INADVERTENTLY TAKING ANYTHING THAT DOES NOT BELONG TO YOU"

Thus, the searches of employees were ended (pp. 67-68).

Further, dress codes, especially in the administrative sectors of the company were abolished. Dress codes were assumed to bring about conformity, and it was expected that responsible adults were able to individually judge which way of dressing was suitable for which situation. "We told our office workers and managers that they could dress as they pleased. Every responsible adult knows how to dress correctly for special occasions." (p. 69)

Introducing Committees

The next initiative saw the formation of worker's committees. These committees were the initial structural step in Semco's transformation into self-organization. The employees of each business unit were asked to form committees that comprised representatives from all the different operational division, such as machinists, mechanics, office workers, stockroom personnel, draftsmen/-women. Managers were not to be included in these committees. The committees elected representatives that would meet with the organizational leadership of each of the production plants. They were given a broad mandate and encouraged to represent the workers' interests. It was especially crucial for Semler to communicate to the unions that these committees were not intended to replace them within the company. To win the unions for the initiative, they were given a seat in these committees. But it wasn't until the workers in the committee were guaranteed job security throughout the process and afterward that these committee members started speaking up and started to engage in an honest and open discussion (pp. 75-78).

Many questions raised by the committees were handed back to them to decide. They continuously broadened their concerns and started taking over managerial responsibilities. According to Semler, the committees became vital to Semco's success. Subcommittees were introduced that were assigned to specific tasks, such as the analysis of the production

processes and their improvement. Employees suggested a system of "manufacturing cells." Each cell consisted of a small number of workers that produced batches of entire products from start to finish. Through the responsibility induced by the direct connection of one manufacturing cell with a product, there was no more need for additional quality control. The quality control department was abolished (Swaab, 2014, p. 6).

These "manufacturing cells" also took charge of the hiring of new colleagues and started organizing their work by themselves. This included the regular rotation of workers between different departments. The manufacturing cells took over responsibilities from the human resources department, which was, as a result, reduced from 90 to two people (Swaab, 2014, p. 6).

Also introduced was a similar committee which consisted of the managerial functions, primarily represented by the heads of the different departments. During the weekly meetings, initiatives were discussed and voted on. But more importantly, in many cases, the committee gave advice but refrained from making decisions. The responsibility was transferred back to the individual departments.

> *"Mara [the marketing responsible] was told that she could publish brochures in whatever color she wanted, with whatever layout she wanted, and hire however many people her budget allowed to help." (Semler, 1995, pp. 82–83)*

The Obsolescence of Middle Management

The handling of middle management was one of the critical elements, significantly determining the success of the change process. Like in many companies at this time and today, Semco's managers had studied at schools focused on traditional approaches structuring organizations according to discipline and supervision. The autonomy that had been given to workers raised concerns with managers who saw themselves unable to ensure performance as their known tools of authority, direction, and control had been eliminated. Semler considered it very important to take these issues of the middle managers seriously.

A weekly meeting of middle managers was introduced. These meetings focused solely on issues related to Semco's policies and philosophy. Operational matters were not to be discussed. For a long time, there had been a discussion whether the policies and rules that were formally still in place should be adapted to Semco's new reality. But it became apparent that new rules and procedures had the potential to threaten the reintroduction of "common sense" into the company. The old manuals that still existed in the company were collected. *"[…] Only after some time, people started to suspect that there was no new manual coming."* (pp. 94-95)

> *"We've found that we can replace nearly every rule […]. This does not mean that all written instructions are forbidden - but our people are not afraid to ignore procedures that don't seem applicable or wise" (p. 96)*

But these initiatives were only partially able to appease middle managers and to win them over for the change process. Between 1985 and 1987, one third of the company's middle managers left Semco (Killian, Perez and Siehl, 1998, p. 3).

Sharing Profits and Information

> *"No one can expect the spirit of involvement and partnership to flourish without an abundance of information available even to the most humble employee. […] The advantages of openness and truthfulness far outweigh the disadvantages." (Semler, 1995, p. 136)*

Openly sharing information within the company was an essential next step to creating employee involvement. It is an indispensable step that needs to precede the sharing of profits. This information includes all data from the financial performance to the salaries of managers. Especially understanding information related to the financial performance of the company or the business departments is important for employee involvement. Factory workers were, accordingly, thought to read balance sheets and to understand the specialized vocabulary involved in the reporting of financial performance (p. 136).

Managers' salaries were not openly published, but whenever someone was asking, this information would be made available. Some managers asked to keep it confidential, which was respected. But the overall size of the different salaries at the various levels became transparent (pp. 136 ff.).

In 1987, profit reached an amount of 20 % to 30 % percent of revenue. Semler considered the initiatives taken by the workers as essential to Semco's success (Swaab, 2014, p. 7). Therefore, a fixed percentage of these profits was to be given to the workers. 40 % would be required for taxes, 25 % were paid as dividends to the shareholders, 12 % were to be reinvested, which left 23 % for the profit sharing plan. It was left to the discretion of the worker's committee how these profits were distributed within the company (Semler, 1995, p. 136).

Removing the Hierarchy

At this point, one last significant change remained outstanding. Semco's organization was still shaped like a pyramid, representing a traditional hierarchical bureaucracy.

> *"Why not replace the pyramid with something more fluid? Like a circle. A pyramid is rigid and constraining. A circle is filled with possibilities. Why not try to round the pyramid? (Semler, 1995, p. 190)"*

It was one of the last, but also one of the most significant changes ahead of Semco. The traditional hierarchy was to be replaced with layers of circles, flattening the hierarchy significantly. The innermost circle would be comprised by around six people, including Semler and other employees that were comparable to vice presidents in conventional companies. They would form the leadership circle that was responsible for the coordination of strategies and general policies (pp. 190-191).

The second circle would include the seven to ten leaders of the different business units and plants. The last circle would encompass everyone else within the company. The latter would also include many of the previously existing departments within the company, such as sales, marketing, or production. These departments were now triangles, led by so-called "coordinators" representing the first level of management. Two weekly meeting were introduced to coordinate these different circles and departments (p. 192).

This also meant that those still in "managerial" functions within this new system would now be voted on. In a bi-annual survey, the performance of the different leaders was assessed in an anonymous survey, and the results were published within Semco. This way, managers with inferior leadership capabilities had the opportunity, but also the pressure, to improve their leadership abilities and their communication with their team. In some cases, it became apparent that managers who had qualified for leadership positions through technical expertise were unsuitable for these managerial positions. In many instances, they were given new, different, and more suitable responsibilities.

> *"It was the most radical change that has so far been conducted at Semco (p. 192)."*

Workers Determine their Salaries

Lastly, workers were to determine their salaries by themselves.

> *"We did not create a process in which an employee would say, 'I want to earn 1000 $ a week,' and his boss would say, 'You only deserve 750 $.' This wasn't supposed to be a negotiation. We wanted each manager to focus on his role in the company and his value. So a boss might tell a subordinate, 'You consider yourself a veteran, but I think you are still a junior purchasing manager.' We hoped they would keep talking until they came to a meeting of the minds." (p. 200)*

Contrary to the common expectation, there were only a few cases of people requesting salaries that exceeded the management's expectation. Workers remained modest, on the one hand because everyone would know if they overpaid themselves, but also since they

knew, due to the transparency, that the company would not be able to offset a sharp increase in costs in the short term. Instead, there were multiple cases in which employees set their salaries too low. Similar to other negotiations, it took the management some time to convince these workers to raise their salary expectations (pp. 200-202)

Semco Today

In the 1990s, Semco was a company with hardly any hierarchies and formal means of control. Semler's gut feeling had turned into a vision. Chaos and demise, which many experts had expected, failed to occur. Between 1990 and 1996, revenue grew from $ 35 million to $ 100 million. Semler created an organization that is incredibly flexible and that people like to work for. The average employee turnover throughout the past two decades has been around 2 %, and there have been no layoffs or strikes during the entire time. Up until 2014 (latest data available), Semco has grown at an average rate of 27 % every year and is today producing thousands of different products. This growth is especially remarkable against the background of multiple economic crises, multiple currency devaluations, and multiple hyperinflations in Brazil. Semler himself withdrew in 1999 from the daily operations of the business. He remains loosely involved and is still the principal shareholder. He has since spent his time applying the Semco model to other organizations, such as a business association, an NGO, a school, and a hotel (Killian, Perez and Siehl, 1998, pp. 11–12; Swaab, 2014, p. 1).

Appendix D: List of Sources Utilized for the Creation of the Case Studies

Semco

Killian, K., Perez, F., & Siehl, C. (1998). Ricardo Semler and Semco S.A. HBR Case Study, 44, 12.

Lloyd, B. (1994). Maverick! An alternative approach to leadership, company organization and management - A discussion with Ricardo Semler, author of Maverick! Leadership & Organization Development Journal, 15(2), 8–12.

Malcher, I. (2010). Mach es zu deinem Projekt! Brand Eins, 9.

Semler, R. (1989). Managing Without Managers. Harvard Business Review, 67, 9.

Semler, R. (1994). Why My Former Employees Still Work for Me. Harvard Business Review, 72(1), 64–71.

Semler, R. (1995). Maverick: The Success Story Behind the World's Most Unusual Workplace. New York, Boston: Hachette Book Group.

Swaab, R. I. (2014). Ricardo Semler: A Revolutionary Model of Leadership. HBR Case Study, 44(0), 0–12.

Traum-Ferienwohnungen

Weber Achim, erzähl mal! (2017). Retrieved November 16, 2017, from https://new-work.traum-ferienwohnungen.de/2017/05/17/achim-erzaehl-mal/%0A

Büntemeyer, L. (2017). Unternehmen ohne Hierarchie „Wir haben keine Chefs. Retrieved November 16, 2016, from https://www.impulse.de/management/unternehmensfuehrung/unternehmen-ohne-hierarchien/3556981.html%0A

Gloger, S. (2017). New Work bei Traum-Ferienwohnungen: Demokratisch, praktisch, gut. Manager Seminare, 26–34.

Grid, A. (2017). Würdet ihr es nochmals wagen? Retrieved November 16, 2017, from https://new-work.traum-ferienwohnungen.de/2017/10/30/wuerdet-ihr-es-nochmal-wagen/

Halang, V. (2017). Ein Unternehmen wie ein Löwenrudel. Retrieved November 16, 2017, from https://enorm-magazin.de/ein-unternehmen-wie-ein-loewenrudel

Raeth, M. (2015). „Startup-Helden" von Traum-Ferienwohnungen im Interview. Retrieved November 16, 2017, from https://www.gruenderszene.de/allgemein/traum-ferienwohnungen-startup-helden

Schmidt, S. (2016). Kein Chef ist auch keine Lösung Was. Retrieved November 16, 2017, from http://www.sueddeutsche.de/karriere/organisationsform-kein-chef-ist-auch-keine-loesung-1.3143466

Wie man seine Firma auf den Kopf stellt. (2017). Retrieved November 16, 2017, from https://new-work.traum-ferienwohnungen.de/2017/05/07/test/

FAVI

FAVI (Part 1): How Zobrist broke down Favi's Command and Controll Structures. (2017). Retrieved November 16, 2017, from https://corporate-rebels.com/zobrist/

FAVI (Part 2): How giving Freedom to Factory Workers Created Massive Success. (2017). Retrieved November 16, 2017, from https://corporate-rebels.com/favi-part-2/

Gilbert, P., Crozet, N., & Tegelborg, A.-C. (2013). Work Organisation and Innovation - Case Study: FAVI, France. International Publications, 15.

Zobrist, J.-F. (2014). La Belle Histoire de Favi: L'Entreprise Qui Croit Que L'Homme Est Bon. World. Paris: Humanusme & Organisation.

Appendix E: Searches

The different keywords were searched through scholar.google.com, the library of the Stockholm School of Economics and the mendelay.com database. The * stands for any combination of letters. Search terms referring to self-organization have been searched for individually or in combination with search terms referring to change. Furthermore, all papers referencing to papers that somehow address a transformation towards self-organization on an organization-wide level have been searched through a reverse search.

self-organ*

self-manag*

teal-organ*

teal management

self-governing

reinventing-organizations

transformation

transition

change