

**Follower insights on complex adaptive systems during periods
of disruption and adaptation**

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A research project submitted to the Gordon Institute of Business Science, University of Pretoria, in partial fulfilment of the requirements for the degree of Master of Philosophy (insert programme name here).

24 November 2024

Declaration

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Philosophy in Corporate Strategy at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

Name & Surname

Signature

ABSTRACT

Leaders in the twenty-first century face a complex and challenging business environment. The pace of technological change and globalisation has created an environment that requires organisations to deal with increased complexity and uncertainty. Organisational leaders must navigate these complexities while also balancing operational stability. Managing disruption requires adaptive, innovative, and creative approaches. This research study aims to provide additional insights into the influence of leadership on innovation and adaptation within complex adaptive systems (CAS). It builds upon existing literature on leadership complexity theories, highlighting the significance of relational and emergent processes. The study examines leader-follower dynamics and their potential to enhance organisational adaptability to disruptions.

This research study used a qualitative method to explore the lived experiences of 16 followers within the research setting of the COVID-19 epidemic. The study followed a phenomenological research design to explore the lived experiences of followers. The exploration included their observations of disruption, their perspective of leadership during disruption, the leader-follower dynamics they experienced during disruption and their own experience of their role expansion during adaptation. Overall, followers' lived experiences within a complex adaptive system during disruption and adaptation are multifaceted. Effective leadership communication, the intricate dynamics between leaders and followers, and the environment's supportiveness shape these experiences. The findings highlight the need for further research on the impact of negative role perceptions and the potential of extending evolutionary leadership theory and constructionist leadership constructs to complex leadership theory as they contribute to understanding the dampening effects on leadership emergence and amplification.

One of the study's main limitations is that it only looked at an external disruption within one sector. Including only followers provides a perspective on the complexity phenomenon; however, it is a limitation as there could be additional insights by expanding the study to include both the lived experience of leaders and followers.

Keywords:

Leader-follower dynamics, Complexity, Complex Adaptive Systems, Disruption, Innovation, Followers

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GLOSSARY OF ITEMS

CLT	Complexity Leadership Theory
ELT	Evolutionary Leadership Theory
COVID-19	Coronavirus Disease of 2019
CAS	Complex Adaptive System
SADC	South African Development Community

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CHAPTER ONE: INTRODUCTION AND BACKGROUND

1.1 Research problem

1.1.1 Background to research problem

Leaders in the twenty-first century face a business environment that is complex and challenging (Davis, 2015). The pace of technological change and globalisation has created a business environment that requires organisations to deal with increased levels of complexity and uncertainty (Trinh & Castillo, 2020). Organisations face external disruptions from their environment and internal complexity driven by the conflict between maintaining operational stability and enabling innovation (Tsai et al., 2019). For organisations to successfully deal with the complexities of modern business, they must grapple with the paradox that it requires complexity to deal with complexity (Davis, 2015). Navigating organisations through these modern challenges places a challenging task on the shoulders of leaders; the volatile, dynamic and challenging situations they face require new approaches to sense-making and decision-making (Gorzeń-Mitka & Okręglińska, 2014).

Modern businesses face multiple sources of disruption and complexity. They could emanate from global networks of customers, supply chains and markets. Disruption in any part of these systems, for example, pandemics and geopolitical challenges, will have ripple effects on multiple businesses and markets (Rees et al., 2020). Beyond global networks, there is also technology that is evolving; emerging technologies such as Artificial Intelligence and blockchain introduce complexity as they get adopted and integrated into existing ways of working (Anthony, 2024). Technological innovation also results in a transition from traditional to digital business models that disrupt organisational culture and systems (Sullivan, 2011).

Given its multiple sources, managing disruption and complexity can seem overwhelming; however, it's not a challenge beyond leadership intervention. Leadership is one of the levers available to organisations to tackle disruption and complexity, mainly when supported by ways of working that accommodate innovation and creativity (Ancona et al., 2020). Leaders need to make sense of a complex world (Ancona et al., 2020). This requires openness to learning, conflict and investing in skills to articulate their sensemaking to others (Ancona et al., 2020). Leadership influence can enable teams to embrace the tension of change and creativity that comes with innovation and adaptability (MacDonald, 2020). This research report aims to add

additional insights into leadership and its influence on innovation and adaptive outcomes in the face of disruption and complexity.

1.1.2 Research problem

Leadership complexity theories have wide-ranging literature articulating how leadership can influence organisations to adapt to disruptions; its academic contributors align with the underlying view that organisations exist in complex adaptive systems (Rosenhead et al., 2019). Baran & Woznyj (2021) articulate that management practices support enabling the agility that allows organisations to adapt to disruption.

While complexity leadership theory acknowledges the importance of relational and emergent processes, it lacks insight into how leader-follower dynamics influence the emergence of leadership within a complex adaptive system (Tourish, 2019). CLT can benefit from additional insights into the topics of leader-follower dynamics and potentially enable organisations to better navigate CAS through practical distributed, relational, and co-constructed leadership processes

This research project explored whether leader-follower dynamics identified through qualitative research can provide additional insights into formulating practices that enable organisations to adapt to disruption.

1.1.3 Theoretical relevance

Complexity leadership theory defines leadership as a process that can be executed by all roles irrespective of hierarchy (Uhl-Bien et al., 2020). CLT has its roots in complexity theory and is applied to the definition of organisations as CAS (Schneider & Somers, 2006). Schneider & Somers (2006) posit that organisations exist in a CAS, and leadership is not about formal authority but about influencing other people and processes to enable the organisations to adapt to disruption (Schneider & Somers, 2006; Uhl-Bien & Marion, 2009).

Some academic voices articulate that further exploration of the leadership process is required beyond the current construct of CLT. Tourish (2018) argues that the dynamics between leaders and followers must be explored more deeply. Further research on this

interaction can offer additional theoretical contributions to CLT. Leader-follower dynamics are not absent of resistance and dissent among followers, and this is not adequately addressed in CLT (Tourish, 2019). There are complexities in leadership relationships that can limit the influence of their adaptive outcomes (Oc et al., 2023; Uhl-Bien et al., 2014).

Wolfram Cox et al. (2022) articulate that leadership emergence occurs during far-from-equilibrium dynamics when a system experiences disruption and transitions to equilibrium. Quantitative and qualitative research offers opportunities to research how pre- and post-disruption practices can change to encourage leadership emergence by individuals who were not expected to drive influence (Wolfram Cox et al., 2022). Rosenhead et al. (2019) criticise the need to develop empirical grounding for applying the scientific assertions of complexity theory to leadership; however, they also state that qualitative research can still offer insights.

This research project will utilise qualitative research methodology to explore and provide a nuanced understanding of leader-follower dynamics within a complex adaptive system by researching followers' perspectives.

1.2 Research Question

The principal research question is an acceptance of the invitation by Tourish (2019) that more in-depth research on the dynamics between leaders and followers can offer additional theoretical contributions to CLT. The researcher explored whether followers could provide further insights into understanding the leadership process articulated in CLT.

For a research study to achieve its objective, a well-formulated research question is required to establish clarity and direction of the study (Braun & Clarke, 2021). According to Bell et al. (2019) the research question is a statement that articulates what the researcher intends to explore. In line with this definition, the principal research question is:

What are the lived experiences of followers within the context of a complex adaptive system during periods of disruption and adaptation?

The principal research question is broken down into four sub-questions that are outlined below:

Research sub-question 1: What do followers observe in their work environment during periods of disruption and adaptation in a complex adaptive system?

Research sub-question 2: How do followers perceive leadership during disruption and adaptation in a complex adaptive system?

Research sub-question 3: What are followers' experiences of leadership and team dynamics during disruption and adaptation within a complex adaptive system?

Research sub-question 4: What are the personal reflections of followers regarding their roles during disruption and adaptation within a complex adaptive system?

1.3 Research Aims

This research report explored leader-follower dynamics from followers' perspectives within a CAS during periods of disruption and adaptation. It aimed to provide additional insights and formulate practices that enable organisations to adapt to disruption, notwithstanding contributing to CLT academic literature. Chapter Two will outline the complexity and follower literature that informed the research question to support the aim.

This research project utilised qualitative research methodology to explore the insights of leader-follower dynamics from the perspective of the lived experience of individuals defined as followers. The research setting is the SADC financial sector during the peak period of the COVID-19 pandemic.

1.4 Research contribution

The research report's exploration of followers' lived experience of disruption and adaptation in a complex adaptive system will provide insights into leader-follower dynamics within the CLT leadership process (Tourish, 2019; Uhl-Bien, 2021; Wolfram Cox et al., 2022). The research findings and comparison to literature potentially confirm existing literature, justify further integration with leader-follower literature, and determine potential extensions to CLT academic literature. This research report's possible practical contributions include formulating practices that enable employees to contribute to adaptive outcomes after internal or external disruptions.

1.5 Research Scope

The research project's theoretical scope was limited to the following academic literature and topics: complexity theory, complex adaptive systems, complexity leadership theory, leadership of emergence, evolutionary follower views, role-based and constructionist follower views. The research methodology selected was qualitative with phenomenological philosophical foundations.

The proposed research problem stems from the following two academic fields. The first field is leadership in complexity theories, which are anchored on the concept of complex adaptive systems and identify leadership as an emergent process that can influence adaptive outcomes (Rosenhead et al., 2019). The second field is leader-follower dynamics, based on academic literature focusing on followers' impact on leader-follower dynamics (Wolfram Cox et al., 2022).

The researcher chose to obtain insights from professionals and middle managers in follower roles, meaning their role was in a hierarchy reporting to a leader role. The research setting was the financial sector in the geographic region of SADC during the peak period of the COVID-19 pandemic. The research setting was selected to find an example of an industry-wide disruption that matches the characteristics of a CAS as the organisation adapted to its impact.

1.6 Outline of research report

Chapter One: Introduction to the research problem. This chapter provides details of the business context and theoretical relevance of the research problem.

Chapter Two: This chapter is a literature review of complexity theory, complex adaptive systems, complexity leadership theory, leadership of emergence, evolutionary follower views, and role-based and constructionist follower views. It will inform the research question and methodology.

Chapter Three: This chapter includes research questions based on the academic literature in Chapter Two.

Chapter Four: This chapter articulates this research report's design and methodology. It covers the rationale for selecting research design, sampling, data collection, and analysis. The chapter also covers managing ethical considerations, rigour, and validity.

Chapter Five: Presents the findings collected using the research mechanism articulated in Chapter Four.

Chapter Six: Includes a comparative analysis of the findings and the academic literature from Chapter Two.

Chapter Seven: This chapter answers the primary research question and potential contribution to complexity leadership theory.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The traditional leadership approaches of a top-down style of leadership informed by a bureaucratic paradigm of control and command to execute ordered solutions are ill fit for the level of complexity leaders face in the modern knowledge era (Uhl-Bien & Arena, 2017). A leadership mindset shift is required from the historical approach of the industrial era as it is ill-fit to navigate the complexity and uncertainty posed by the business environment of the knowledge era (Davis, 2015). As articulated in Chapter One, this research report intends to explore new perspectives on complexity leadership and contribute to the academic literature.

This literature review section introduces two constructs and argues that there is a basis in existing leadership academic literature for further research to explore how leader-follower dynamics can offer new insights into how the leadership process produces adaptive outcomes for an organisation (Lichtenstein, 2016). Table 1 provides an overview of the flow of this literature review.

Table 1: *Literature review overview*

Section	Heading	Subheading
2	Literature review overview	
2.1	Introduction	
2.2	Complexity theory and leadership	
2.2.1		Complexity theory
2.2.2		Complex adaptive systems
2.2.3		Complexity leadership theory
2.3	Leader-follower dynamics	
2.3.1		Evolutionary view
2.3.2		Role-Based views
2.3.3		Constructionist approach
2.4	Conclusion	

Note. The researchers' compilation and summary of Chapter Two

The first section of this literature review presents the academic conversation on complexity and leadership; given that the setting for the research problem is organisations facing complexity, scholarly literature provides the building blocks that answer the research question.

Leadership and complexity have their roots in complexity theory and its application to the definition of organisations as CAS (Schneider & Somers, 2006). The view positioned by Schneider & Somers (2006) that organisations exist in complex adaptive systems informs the hypothesis that leadership is not about formal authority but about influencing other people and processes to enable the organisations to adapt (Schneider & Somers, 2006; Uhl-Bien & Marion, 2009).

CLT introduces an additional definition of leadership within CAS by articulating a framework for leadership that enables an organisation to increase its capacity to learn, innovate and adapt through self-organisation without sacrificing management control (Uhl-Bien et al., 2007). According to Lichtenstein & Plowman (2009) provided a set of conditions are met, a CAS can produce emergent outcomes; this is referred to as emergence, and it is a phenomenon in complexity theory defined as outcomes from the complex interactions of individual parts of a system (Lichtenstein & Plowman, 2009). Plowman et al. (2007) further propose that not only do CAS produce emergence, but there are also specific leadership behaviours that manifest the conditions for emergence to occur.

Rosenhead et al. (2019) review of complexity leadership academic literature concludes that applying complexity ideas in leadership practice is difficult to validate with empirical analysis. Despite the challenges in measuring the practice, academic literature does offer guidelines on how to apply complexity theory to leadership practice (Rosenhead et al., 2019). The research problem depicts organisations facing complexity created by global crises, which creates urgency for leadership to ensure their organisation adapts.

Leadership in complexity theory sets the context for the challenge, and the research questions required an exploratory research paradigm to determine if the dynamic between leaders and followers can offer additional insights into adapting to a complex adaptive system. Academic literature on leadership, in its majority, looks at the role of the leaders as the influential driver in producing organisational outcomes; over the last two decades, there has been a growing number of academic literature on how follower-related factors can influence leadership outcomes (Oc et al., 2023). Table 2 provides a view on leader-follower academic contributions, which will be covered to support the argument of extending the lens on the complexity of the leadership process to include followers.

Table 2: *Leader-follower summary of academic contributions included in the Literature Review*

Theoretical Frameworks	Field of research
Role-based views	Implicit Leadership Theories
	Implicit Follower Theories
	Reversing the lens: Leader-Member Exchange
Constructionist approach	Adaptive Leadership Theory
	Co-Production of Leadership
	Leadership as a relational process
	Social construction of leadership
Evolutionary views	Evolutionary analysis of Leadership and Followership

Note. The researchers' compilation and summary of Section 2.3 of Chapter Two

Bastardo & Van Vugt (2019) research on followers takes an evolutionary perspective. It articulates that humans' decisions to follow leaders is an evolutionary response to ensure they benefit from coordination and collaboration. Follower academic literature also includes Role-Based views, they are based on the hierarchical context of leaders and followers; it reverses the lens to understand followers' impact on leadership outcomes (Uhl-Bien et al., 2014). In addition, the constructionist view of leadership does not focus on the hierarchic relationship between leaders and followers; it defines how the interactions between people in a social and relational context can co-create leadership and followership outcomes (Uhl-Bien et al., 2014).

2.2 Complexity theory and leadership

2.2.1 Complexity Theory

The research problem in Chapter One of this report is leadership within complexity. Any argument exploring new research insights must be anchored in understanding the context. For the context to be understood, the concept of complexity and its application to leadership must be the first building block. The starting point of contributing to academic literature that will help solve the business problem of enabling organisations to navigate complexity will start with introducing academic thinking on why the business environment is defined as complex.

Complexity Theory has been applied to a wide range of research fields; this list includes and is not limited to education, public enterprises, biology, neurology, sociology, philosophy, mathematics and organisational science (Marion & Uhl-Bien, 2001; Plowman et al., 2007;

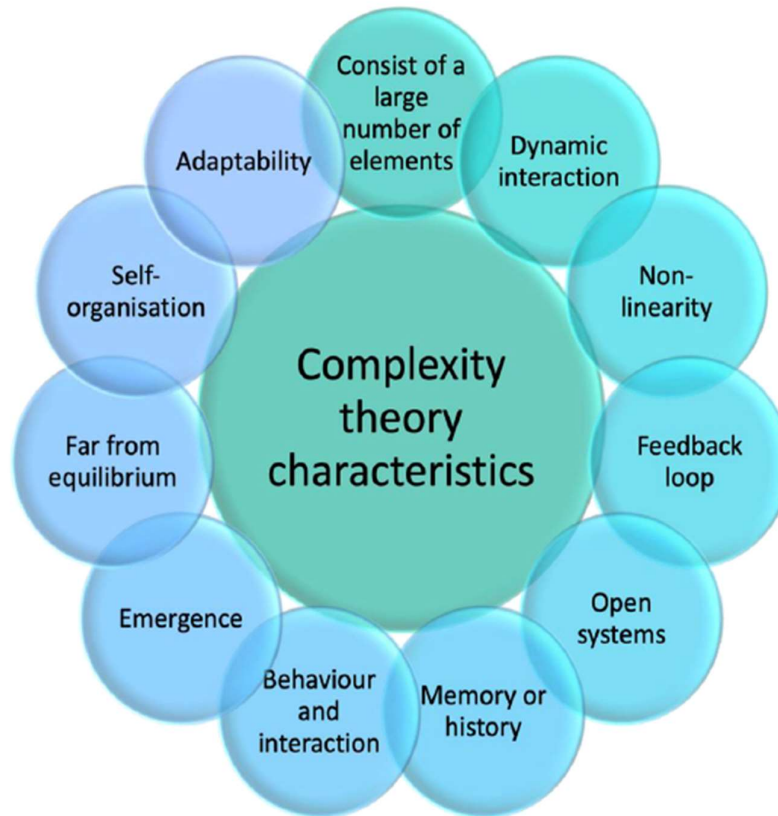
Rosenhead et al., 2019). The application of complexity theory, which will be the focus of this research report, will be how it is applied to the field of leadership.

Complexity is when interconnected things that interact with each other in unpredictable ways and they change each other in ways that are close to impossible to reverse (Arena & Uhl-Bien, 2017). Johnson (2009) articulates the definition of complexity with this succinct abstraction “Complexity is the study of phenomena which emerge from a collection of interacting objects” (p.1). Complexity is distinct from defining something as being complicated. Uhl-Bien & Arena (2017).

The following illustration will be helpful to clarify the statement that a mechanical system is complicated, but in its construct, its parts interact and do not change each other and can be dissembled to make a different object, yet the components will remain the same (Uhl-Bien & Arena, 2017). Complex systems, however, result in changes in these parts as they interact with each other (Uhl-Bien & Arena, 2017). For example, when you bake a cake, the ingredients will change, and you cannot disassemble them back to their original state (Uhl-Bien & Arena, 2017).

There is a wide range of contributors to complexity theory; Figure 1 below is a compilation by Swart (2023). It will help articulate the characteristics of complexity theory and create an understanding of the research question's context. Swart (2023) derived the general characteristics of complexity theory from a range of articles; in addition to the figure below, this section will also include a summary of each attribute to aid the understanding of complexity theory. Key things to note regarding the characteristics, non-linearity and feedback loops are sub-characteristics of the dynamic interaction's characteristic (Swart, 2023). Behaviour interaction and emergence will be combined into one subsection, and the same approach will be applied to adaptability and self-organisation characteristics (Swart, 2023).

Figure 1: *Characteristics of complexity theory*



Note. This figure was produced by Maret Swart, consolidating the characteristics of complex theory from multiple academic contributors. From “Complexity leadership theory: an exploratory study in the South African context,” by M,Swart, 2023,p 53.

2.2.1.1 Large numbers

Complex systems are made up of many individuals; however, although this is a required characteristic, it is not solely required to define complexity (Cilliers, 1998). Complex systems do not only include large numbers of individuals; they also must interact with and affect each other (Marion & Uhl-Bien, 2001; Uhl-Bien et al., 2007). This is what generates unpredictable behaviour in a complex system (Marion & Uhl-Bien, 2001; Uhl-Bien et al., 2007). Individuals in a complex system interact with each other and their environment, and the various ways these individuals interact result in different patterns (Trinh & Castillo, 2020). The interactions can occur at different levels and can be informed by local information but are bound by a common overarching goal and purpose (Uhl-Bien et al., 2007).

2.2.1.2 Dynamic interactions

Interactions are non-linear so that small actions can have amplified effects, and significant actions can have minor effects (Cilliers, 1998). Aritua et al. (2009) articulate this phenomenon as changes that can cause unpredictable and disproportionate outcomes and consequences. The interactions also have feedback loops. They can feed on themselves and be negative or positive and influence future behaviour (Cilliers, 1998).

2.2.1.3 Open Systems

Complex systems have the characteristics of an open system; however, the theory does not assume that it applies to all of them (Schneider & Somers, 2006). The environment impacts open systems, meaning there is information and energy flow between the system and the environment (Aritua et al., 2009). A complex system should not reach a stable state that limits its capability of reacting to its environment (Aritua et al., 2009; Schneider & Somers, 2006).

2.2.1.4 Memory or history

A complex system has memory spread throughout instead of in one place (Cilliers, 1998). The memory determines the system's name; it contains the meaning of changes, so when the system changes, it can be informed by its past (Cilliers, 2000).

2.2.1.5 Emergence

Interactions in a complex system determine its behaviour (Cilliers, 2000). Each element in the system responds to local information rather than how the system has been behaving as a whole (Uhl-Bien & Arena, 2018). Due to the richness of the interactions, dynamism, and non-linear nature, the system's behaviour becomes unpredictable (Cilliers, 2000). This phenomenon is defined as emergence; it is a process that involves ongoing creativity and addressing adaptive changes required to meet external demands placed on the system (Miller et al., 2022). Table 3 is an overview of the activation sequence of the four stages of emergence (Mendes et al., 2016).

Table 3: Breakdown of emergence stages

Emergence cycle	Order
Disequilibrium	First stage
Amplification	Second stage
Recombination	Third stage
Stabilisation	Fourth stage

Note. Adapted from “Understanding Leadership for Adaptive Change in Catholic Schools: A Complexity Perspective” by A.F. Miller, A. Noble, and P. Mcquillan, 2022, *Journal of Catholic Education* 25(1), p. 59.

Disequilibrium

The first stage of emergence is disequilibrium (Mendes et al., 2016). When the system is in equilibrium, it is stable, and system behaviour is routine, uniform, and predictable (Uhl-Bien & Arena, 2018). Destabilising elements that result in disruption and unstable conditions in the environment are the cause of disequilibrium (Uhl-Bien & Arena, 2018). Destabilising elements could be internal innovation and changes in the external environment (Plowman et al., 2007). Disequilibrium occurs when adaptive tensions increase and push the entire system into a far-from-equilibrium state; in this state, energy and information can enter the system (Plowman et al., 2007).

The energy can, at a point, overcome being dampened, and at this stage, it spreads throughout the entire system and affects current behaviour and existing symmetries, therefore creating disorder (Plowman et al., 2007). The energy imported into the system forms dissipative structures, which are unpredictable and lead to spontaneous self-organisation that results in new unpredictable orders (Chiles et al., 2004; Plowman et al., 2007; Schneider & Somers, 2006).

Amplification

Amplification is the reinforcement of feedback to process fluctuations that can result in alternative paths to restore stability; it is required for emergence to occur (Hazy & Uhl-Bien, 2015). There are two forms of feedback: negative feedback dampens change and maintains existing structures, whereas positive feedback generates momentum for alternative paths (Plowman et al., 2007). Positive feedback enables momentum in the system away from the far-from-equilibrium state (Plowman et al., 2007). In this state, the system is sensitive to

changes in the system dynamics, and a small change can result in radical change as its feedback loops into itself, gaining momentum as it spreads throughout the system (Plowman et al., 2007; Uhl-Bien & Arena, 2018).

Recombining

When the system reaches its capacity and critical threshold, it will self-organize or breakdown (Lichtenstein & Plowman, 2009). Dissipative structures formed in the disequilibrium stage are from existing elements that have been reconstructed to create new structures (Chiles et al., 2004). New structures are formed from existing structures that are reconstructed, rearranged and recombined by recombining dynamics (Chiles et al., 2004).

Stabilisation

Stabilisation conditions ensure the system does not become uncontrollable by dampening the feedback that drives amplification (Lichtenstein & Plowman, 2009). Stabilisation is not the return to equilibrium; it balances the dynamics of positive feedback, resulting in new routines in the system (Hazy & Uhl-Bien, 2015; Rosenhead et al., 2019).

Understanding the triggers and sequence for emergence is an essential anchor to CAS and CLT (Miller et al., 2022). The emergence process is the bridge from disruption to adaptation and is an essential context for understanding the role of leadership in navigating an organisation through complexity.

2.2.1.6 Far from equilibrium

The edge of chaos is a state between linear predictability and chaos; linear predictability results in stagnation, and if the system transitions into chaos, it experiences disintegration (Murray, 2017). When a system is on the edge of chaos and far from equilibrium, it is at its most creative space (Morrison, 2010). According to Cilliers (1998) the system must be far from equilibrium with continuous energy flow to prevent entropy stagnation.

2.2.1.7 Adaptability and self-organisation

Complex systems are adaptive; they meet this definition due to their ability to change in response to feedback from their emergent conditions and outcomes of their rich interactions (Schneider & Somers, 2006; Trinh & Castillo, 2020). Adaptability allows the system to have parts of it fail and recover; without this characteristic, the entire system would if there is a disturbance from the external environment (Siegenfeld & Bar-Yam, 2020). Adaptability ensures that CAS can reorganise its internal structures independent of external intervention (Heylighen & Gershenson, 2006). The process of organising and reorganising is defined as self-organisation; it allows complex systems to change their internal structure to manipulate their environment (Cilliers, 1998; Morrison, 2010).

Three types of transition can be identified with self-organisation (Manson, 2001). Self-organisation enables the system to learn from the changes in its internal structures and improve while maintaining interactions with the environment (Manson, 2001). A system can become dissipative when affected by internal or external forces; this allows it to accommodate being unorganised and then return to an organised state (Manson, 2001). Systems self-organise to a critical state, and this is a point of balance between randomness and equilibrium (Morrison, 2010). Self-organisation within systems has time scales to enable change in line with the pace of environmental changes (Cilliers & Preiser, 2016). However, it can be relatively quick for some parts of the system. They must change slowly to ensure sustainability (Cilliers & Preiser, 2016).

2.2.2 Complex Adaptive System

2.2.2.1 Characteristics of a complex adaptive system

The groundwork for applying complexity theory to leadership and management practices starts with introducing academic research outputs that use complexity theory to define organisational processes (Rosenhead et al., 2019). This paradigm shift introduced complexity theory to analyse how organisations function and attribute them to properties of a complex adaptive system (Schneider & Somers, 2006). Figure 2 is a summary of multiple characteristics of CAS (Mccarthy et al., 2006; Turner & Baker, 2019), the most common characteristics that are also shared by complexity theory are emergence, edge of chaos, large numbers, adaptability, non-linearity and self-organisation (Mccarthy et al., 2006; Turner & Baker, 2019).

Figure 2: *Characteristics of complex adaptive systems*

(Trinh & Castillo, 2010) Emergence Recursion Self-organisation Adaption Independence Generativity	(Aagard, 2021) Fitness landscape Adaptive capability Integration Differentiation Fragmentation	(Boal & Schults, 2007) Strange attractors Agent cooperation Strategic leadership Dissipative structures History
(Lauser, 2010) Connectivity Interdependence Feedback Far-from-equilibrium Emergence	(Kelly & Alison, 1999) Non-Linearity Open system Feedback loop Scalable Emergence	(Artura, Smith & Bower, 2009) Inter relationships Adaptability Self-organisation Emergence feedback
(Hanseth & Lyntinen, 2010) Non-Linearity Emergence Irreversibility Non-predictability	(Lindberg & Schneider, 2013) Path Dependence Non-Linearity Emergence Adaptive	(Dodder & Dare, 2000) Emergence Edge of chaos Many individuals Adaptability
(Albert, Kreutzer & Lechner, 2015) Modularity Concentration Openness	(Sorano, DeMattos, Miller & Park, 2012) Diversity Interaction Autonomous	(Uhl-Bien & Arena, 2018) Adaptability Network Emergence
(Borzillo & Kaminska-Labbe, 2011) Adaptive tension Enabling leadership Requisite variety	(Grisgono & Ryan, 2003) Many individuals Adaptability	(Antonocopoulou & Chiva, 2007) Schema-diversity Interaction-interdependence

Note. This figure was adapted from an analysis by Turner and Baker (2019) on complex adaptive systems literature. From "Complexity Theory: An Overview with Potential Applications for the Social Sciences" by J.R. Turner and M. Baker, (p.6-8), 2018, University of North Texas. Copyright 2019 by the authors.

Emergence

Understanding the behaviour of a CAS can be achieved by evaluating the emergent outcomes of the consolidated impact of its embedded behaviour (Mendes et al., 2016). CAS provides the context for the research question articulated in Chapter One and will be a recurring characteristic when articulating the role of leadership in navigating complexity. Emergence results in novel and unknown solutions to problems and can be associated with learning and creativity (Uhl-Bien et al., 2007). The unknown solution can emerge when questions are asked, and there is reflection on how it occurred without any deliberate planning, organising and control of interactions leading up to it (McCarthy et al., 2006).

Edge of chaos

Leaders experience overwhelming pressure to restore stability and bring an organisation to equilibrium; they prefer to avoid conflict and maintain control; this works against the characteristics of a CAS (Uhl-Bien et al., 2007). Uhl-Bien et al. (2007) argue that, compared to traditional leadership practices, the role of a leader is not to reduce uncertainty but to promote it and make it acceptable. Leaders should encourage surprises; more on this will be covered in the complexity leadership section (Uhl-Bien & Arena, 2018).

Large numbers

The non-linearity characteristic is also covered with large numbers. The magnitude of individuals is a characteristic that has a similar nuance to its articulation in complexity theory (Siegenfeld & Bar-Yam, 2020). Social networks in a CAS interact in a non-linear manner, although individuals interact indirectly and experience feedback loops (Mennin, 2007). The non-linear interactions between individuals in a CAS create patterns that are unique and unpredictable (Uhl-Bien & Arena, 2018). Mennin (2007) articulate that in a CAS, breakthroughs can come from even subtle phrases shared between individuals.

Adaptability

The characteristics of multiple interactions and the structures of a CAS allow for quick responses to its environment (Uhl-Bien et al., 2007). CAS is not governed by a single rule controlling it; due to its multiple variables playing out, it cannot be predicted by linear equations (Mendes et al., 2016). Self-organisation characteristic applies to CAS similarly to its application in complexity theory (Swart, 2023).

CAS and complexity theory share similar characteristics, as demonstrated by review and analysis conducted by Turner & Baker (2019). Rosenhead et al. (2019) argue that the characteristics of complexity theory and CAS, which emanate from scientific research in the natural domain, require circumspection before being transferred to the social domain. Social systems like management structures in an organisation are not more complex than natural systems; they are just complex differently (Rosenhead et al., 2019).

The specific results from complexity theory that are being applied to organisations on the basis that they can be supported by scientific authority and therefore offer lessons to leadership practice are on shaky ground (Rosenhead et al., 2019). Although Rosenhead et al. (2019) cautions against the scientific validity of applying complexity theory to organisational leadership, it can still offer value in understanding the lived experience of complexity while the quantifiable has developed. Therefore, this report's qualitative exploration of complexity leadership can still contribute to academic literature and offer insights into complexity leadership (Rosenhead et al., 2019).

2.2.2.2 Considerations for leadership

The proposed scope of the research project is not solely about CAS; its relevance to the research question is the context it provides for insights into leadership and complexity. Rosenhead et al. (2019) caution that although leadership within a CAS is anchored in the scientific theory of complexity, the social nature of leadership dynamics will also benefit from the insights of exploratory qualitative research methodologies. Schneider & Somers (2006) research on leadership in complexity followed a positivist paradigm, resulting in the proposition that leadership is not tied to roles of formal authority. It influences adoption or innovation indirectly by affecting the organisation's culture (Lichtenstein et al., 2006).

Schneider & Somers (2006) define culture as a variable called organisational identity; the role of leadership is to mediate this variable to impact the organisation indirectly. In their critique of complex leadership research, Rosenhead et al. (2019) acknowledge the scientific rigour of Schneider & Somers (2006) approach; however, they conclude that even though leadership within CAS is anchored in the scientific theory of complexity, the social nature of leadership dynamics will also benefit from qualitative research methodologies that gather additional insights from an exploratory approach. Despite its origins in scientific theory, academic literature on leading complexity invites further research using interpretive research paradigms (Rosenhead et al., 2019).

2.2.3 Complexity Leadership Theory

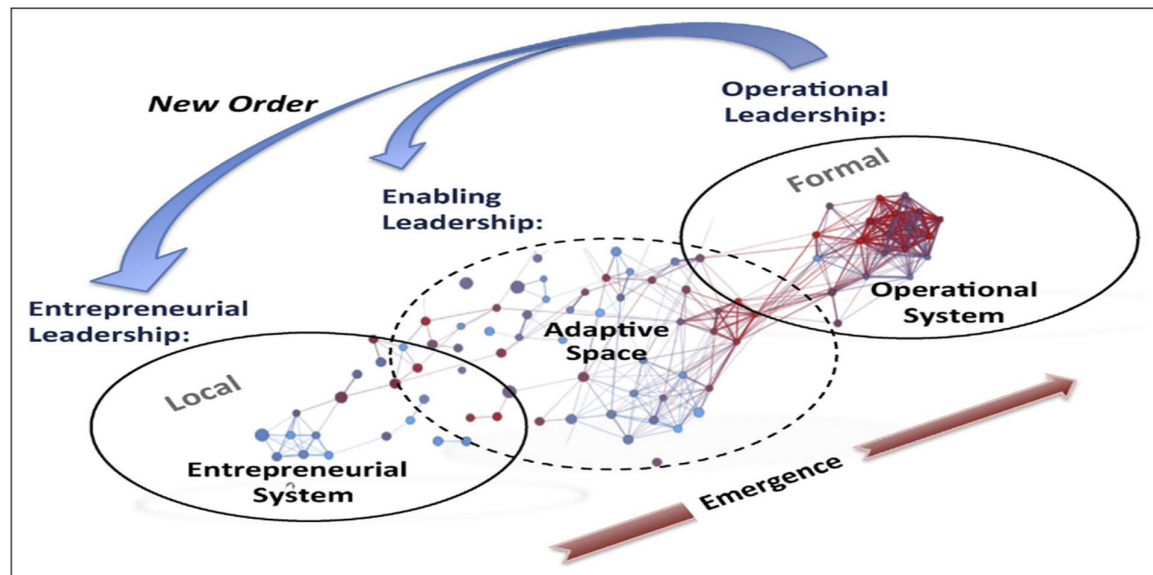
2.2.3.1 Definition of complexity leadership

The research question intends to gain insights into the organisational challenge of adapting to disruption, which introduces complexity and requires creativity and rapid learning. Uhl-Bien et

al. (2007) published literature introducing a leadership framework called complexity leadership theory, which articulates strategies and behaviours that can take advantage of a CAS's dynamic capabilities.

Uhl-Bien & Marion (2009) propose that adaptive dynamics are entangled with the bureaucratic administrative functions of an organisation, and the interaction between the two can result in emergent outcomes; this introduces administrative and adaptive leadership roles to complexity leadership. Figure 3 is a visual model of complexity leadership model showing the interaction between the leadership and systems that result in emergence according to CLT (Uhl-Bien & Arena, 2017).

Figure 3: *The complexity leadership model*



Note. This figure was produced by Uhl Bein and Arena (2017) to demonstrate the complex leadership model. From “Complexity leadership: Enabling people and organizations for adaptability,” by M. Uhl-Bien and M. Arena, (p.7), 2017, *Organizational Dynamics* (2017). Copyright 2016 by Elsevier Inc.

Entrepreneurial leadership

Uhl-Bien et al. (2007) identified entrepreneurial leadership as adaptive leadership in some of their original work. This has evolved into the current definition of entrepreneurial leadership in Arena & Uhl-Bien (2017). Entrepreneurial leadership involves creating new ideas and

innovative solutions as a response to external or internal pressure to innovate; it also involves taking advantage of new opportunities (Uhl-Bien & Arena, 2017). Entrepreneurial leadership operates through a creative process that often involves networks that inspire new ideas; the challenge they face is staying motivated in an environment that is only sometimes responsive to new ideas. Uhl-Bien & Arena (2017) identify that entrepreneurial leaders tend to be individuals with a bias to action; they are flexible and persistent and require patience to wait for the opportunity for their ideas to be relevant.

Enabling leadership

Enabling leadership has remained part of the definitions of the Complex Leadership Framework (Uhl-Bien & Arena, 2017). It bridges and links innovation into the organisation to scale new ideas. Uhl-Bien & Arena (2017) state that “it works to nurture and enable adaptive space that feeds and fuels emergence for adaptive responses in a system” (p. 9). Enabling leadership practices requires development and should be rewarded to ensure that they are sustainable; they are not in any part of the organisation and spend most of their energy opening and nurturing the adaptive space (Uhl-Bien & Arena, 2017) . The principles and practices of Enabling Leaders include applying complexity thinking, leveraging network structures, engaging with complexity dynamics, leveraging adaptive tension, linking up individuals and enabling an adaptive space (Uhl-Bien & Arena, 2017).

Operational leadership

Uhl-Bien et al. (2007) refer to operational leadership as administrative leadership; it relates to the individuals in formal managerial roles who look after planning, task allocation, budgeting, and managing the organisational strategy. In complexity, Operational Leadership has a formal role in accommodating change from the adaptive and entrepreneurial system rather than resisting it (Uhl-Bien & Arena, 2018).

However, this will cause tension as the operational system has constraints and limitations that must be considered (Arena & Uhl-Bien, 2017). Operational leaders are critical to emerging ideas scaling in the operational system (Uhl-Bien & Arena, 2017). They achieve this by creating energy to push through resistance to new ideas. An approach identified in the Uhl-Bien & Arena (2017) research is sponsorship. Sponsorship supports new ideas in the

operational space and helps them overcome the hurdle of resistance they face when (Uhl-Bien & Arena, 2017).

2.2.3.2 Leadership of Emergence

Lichtenstein (2016) articulate that leadership in the complex adaptive system is not a role attributed to any individual and should be viewed as an interactive dynamic between agents. Adaptive leadership can occur anywhere with individual influence and adaptive outcomes irrespective of their role (Lichtenstein, 2016). Uhl-Bien & Marion (2009) and Hazy & Uhl-Bien (2015) complexity leadership frameworks have similarities in recommended functions for leadership; they ensure practices of innovation, sharing of new ideas, and administrative activities to ensure implementation and networking to build shared identity. Uhl-Bien & Arena (2018) stipulate leadership principles and practices that will influence adaptive outcomes while still having administrative leadership activities to ensure implementation.

The enabling principles are managing tension and conflict to levels that allow new ideas to emerge, creating networks to enable new ideas to flow in the organisation and identifying opportunities for new ideas (Uhl-Bien & Arena, 2018). The leadership process contributes to emergent outcomes in an innovative and adapting organisation (Miller et al., 2022). There is a sequence of conditions that indicate a state of emergence and self-organisation; the first is dis-equilibrium and refers to disruption; actions need to be amplified so that their impact can spread throughout the organisation; post the disruption, the system self-organizes and reconstitutes itself and applies the innovation at scale, and this is supported by stabilising feedback and legitimising the application of the innovation as a new way of operating (Rosenhead et al., 2019).

According to Lichtenstein & Plowman (2009), these conditions are supported by the following leadership behaviours: disrupting existing patterns, encouraging and supporting new ideas, making and giving sense by interpreting disruption and applying storytelling to help peers and networks in the organisation make sense of it, and stabilising feedback, which ties to legitimising innovation or change.

Wolfram Cox et al. (2022) articulate that leadership emergence occurs during far-from-equilibrium dynamics when a system experiences disruption and transitions to equilibrium.

Leadership emerges to influence the organisation to adapt as it reaches a new equilibrium (Hanna et al., 2021). Leadership emergence is not attributed to existing leadership roles; it is a set of behaviours that any individual in the organisation can exhibit (Wolfram Cox et al., 2022). Tourish (2019) also mentions that leader-follower dynamics, resistance and dissent among followers can limit or dampen adaptive outcomes. Tourish (2019) cautions that a deeper look at the leadership process in complex leadership theory is required; there are complexities in leadership relationships that can limit the influence of its adaptive outcomes.

2.2.3.3 Considerations for Future Research

The future research direction proposed by Wolfram Cox et al. (2022) is the far-form equilibrium dynamics field of leadership emergence, which offers quantitative and qualitative research opportunities to research how pre- and post-disruption practices can change to encourage leadership emergence by individuals who were not expected to drive influence. Combined with Tourish (2019) articulation, this highlights that leader-follower dynamics need further exploration in the emergence process and motivates further research. Rosenhead et al. (2019) criticise that the empirical grounding for applying the scientific assertions of complexity theory to leadership still needs to be developed further; however, they also state that qualitative research can still offer insights. Based on these views, the research question shared in Chapter One was answered using qualitative methods and design.

2.3 Leader- Follower Dynamics

2.1.3 Evolutionary view

CAS and CLT position disequilibrium as a driver to ongoing innovation in an organisation; leadership has a role to play in the process of emergence (Uhl-Bien & Arena, 2017). The invite from complexity leadership literature is that there is more to be explored in terms of leader-follower dynamics in the leadership process and emergence (Rosenhead et al., 2019). The research aim is to explore whether there are additional insights into navigating complexity that inform a holistic approach to ensuring followers and leaders can contribute deliberately to emergence. Academic literature on followers and their influence on leadership informed how the research question was constructed to explore leader-follower dynamics.

CLT academic literature views leadership and followership as adaptive human responses that evolved to overcome the challenges of social groups cooperating and coordinating to achieve their survival goals (Pietraszewski, 2020). Applying insights from ELT models can help

organisations enhance cooperation and enable resilient leadership dynamics in complex environments (Van Vugt et al., 2008). Van Vugt et al. (2008) conducted game theory experiments that highlighted the value of establishing a leader-follower relationship. Over time, humans evolved adaptive strategies to efficiently manage the balance between leading and following, supporting the observations that leadership and followership are not rigid roles but flexible strategies depending on context (Pietraszewski, 2020).

The emergence phase of a CAS is when creativity and reorganisation play out in the organisation; traditional organisational leadership structures are ill-equipped to support this process (Lichtenstein, 2016). Van Vugt et al. (2008) articulate hierarchical structures clash with our evolved leadership psychology. Leadership in ancestral environments was context-specific, dynamic, and in small groups (Van Vugt et al., 2008).

Pietraszewski (2020) positions that leadership and followership are evolutionary outcomes to address coordination issues with social groups. According to Pietraszewski (2020) Leaders propose coordination tasks, and followers choose the one they assume will be successful. This enables groups to converge on an optimal strategy to survive (Pietraszewski, 2020). Followership is not a passive choice but rather a strategic choice based on perceived benefits (Bastardo & Van Vugt, 2019). According to CLT, leaders foster emergent context-driven solutions through facilitation rather than rigidly directing actions; this requires flexibility to follow directions depending on the context (Uhl-Bien et al., 2020). Human evolution studies indicate that the role of leadership is taken based on context and needs versus a fixed hierarchical structure (Pietraszewski, 2020).

CLT literature recommends that organisations structure themselves to accommodate adaptive and decentralised leadership roles. This is in line with natural flexibility from ancestral environments (O'Connell et al., 2023). Distributed leadership environments align with psychological constructs that have evolved in human beings and can result in positive leader-follower dynamics and closer alignment to leadership emergence within a CAS (Bastardo & Van Vugt, 2019; Wolfram Cox et al., 2022).

Role-Based Views

Uhl-Bien et al. (2014) state that “the study of fellowship involves an investigation of the nature and impact of followers and following in the leadership process” (p. 89). Organisations defined as CAS comprise both followers and leaders (Uhl-Bien et al., 2014). Emergence requires rich interaction to reorganise old ways of working into new ones; if leadership has a role in facilitating this process, then followers also have a role to play (Uhl-Bien, 2021). Role-based views examine leadership and followership roles being enacted within the context of hierarchy (Uhl-Bien et al., 2014). Role-based academic literature primarily aims to understand how follower characteristics and behaviour determine desired organisational outcomes (Uhl-Bien et al., 2014).

McKimm & Vogan (2020) categorize followers based on their behaviours towards their leaders. The categories depend on whether followers are passive, engaged, or active, including evaluating if they challenge or support their leaders (McKimm & Vogan, 2020). CLT articulates that leadership that works through influence (Uhl-Bien & Arena, 2017). Follower typologies can dampen this impact if followers are passive; however, if followers challenge leadership, this can be favourable as it requires productive conflict, provided followers are engaged and committed (Arena & Uhl-Bien, 2017; McKimm & Vogan, 2020).

Implicit follower theory is a construct that refers to the personal assumptions individuals have about what makes a good follower; implicit leadership theory refers to the assumptions of what makes a good leader (Foti et al., 2017). The assumptions influence how leaders and followers perceive each other and, as a result, how they choose to behave towards each other (Lord et al., 2019). IFTs are structured into two categories that provide dimension to the understanding of leaders' perceptions of the traits and behaviours of followers (Sy, 2010). First-order categories have prototypical attributes and antiprototypical attributes; prototypical attributes are positive traits that include followers being responsible, ethical, diligent and motivated (Sy, 2010). Antiprototypical attributes are negative traits that include being submissive, unassertive, defiant to authority and lacking ability (Sy, 2010).

Second-order constructs are built from first-order attributes (Lord et al., 2019). The followership prototype is the positive desirable traits that leaders want from followers, and the followership antiprototype is the negative, undesirable traits that meet followers' expectations (Sy, 2010). IFTs impact interpersonal outcomes like trust, job satisfaction and relationship

quality; followers who follow a leader's IFT are likelier to work well with their leader (van Gils et al., 2010). Leaders' and followers' fixed and rigid assumptions can hamper their communication and collaboration (Sy, 2010). In CAS, alignment and productive tension are required for emergence and adaptive outcomes; alignment between IFTs and ILTs will facilitate openness between leaders and followers to adopt new ideas from each other (Lichtenstein & Plowman, 2009).

The traditional view on leadership is that leaders influence followers more than followers influence them (Xu et al., 2019). Leader-member exchange is a construct that examines the bidirectional relationship between leaders and followers; it focuses on how the proactive behaviours of followers can improve the quality of LMXs (Uhl-Bien et al., 2014). Followers with achievement-driven goal orientation are a valuable resource to their leaders (Xu et al., 2019). They exhibit proactive behaviours like coming up with ideas, and as a result, they have higher-quality exchanges with their leaders (van Gils et al., 2010). Followers who exhibit proactive behaviour and are perceived to have trust in their leaders and have higher quality LMX with the leaders (Khan et al., 2020). Followers who engage proactively and can positively shape leader-follower dynamics create a feedback-rich environment that enables leaders to be effective facilitators of adaptive outcomes articulated in CLT (Hazy & Uhl-Bien, 2015).

2.3.4 Constructionist approach

Uhl-Bien et al. (2014) share that "constructionist views describe how people come together in a social process to co-create leadership and followership" (p. 95). Constructionist views challenge the traditional view that leadership roles are static and can shift between relationships (Uhl-Bien et al., 2014). The view articulated by DeRue & Ashford (2010) is that leadership identities are dynamic and shift between leaders and followers. The identity of leadership is a social construct with dependencies; the individuals need to see themselves as leaders, and their environment and colleagues need to acknowledge their leadership identity for it to be constructed (DeRue, 2011). The implications are that the social ecosystem and relations between individuals must enable leaders' identities to be dynamic (DeRue, 2011).

Identifying leadership as a social construction that can enable fluid leader-follower identities depending on context introduces complexity in organisations that still have structures informed by hierarchy (DeRue, 2011). The model of group dynamics shared by DeRue (2011) presents insights into leadership emergence and opens possibilities to observe the

leadership process in the context of self-organising outcomes articulated by complexity theory (Rosenhead et al., 2019). Adaptive leadership theory implications extend beyond contributing to a constructionist approach but will also research implications for role-based approaches as the implicit identity of a follower or leader becomes fluid (Wolfram Cox et al., 2022).

Constructive approaches contribute to the understanding of leadership as a co-created adaptive process (DeRue, 2011). Leaders and followers actively shape leadership through constructive, dynamic, and contextual interactions (Uhl-Bien et al., 2014). Constructive interactions between leaders and followers contribute to emergence by enabling distributive influence and interdependent relationships versus formal hierarchies (Wolfram Cox et al., 2022).

2.4 Conclusion

It is essential to revisit the research's aim to analyse and synthesise the literature shared and covered in the review. The research aim was to explore if leader-follower dynamics can provide additional insights into the leadership process articulated in complexity leadership theory. The first core principle from complexity leadership literature is the CAS articulated by Schneider & Somers (2006) and present in all other literature, the latest being the review by Rosenhead et al. (2019). The research question is anchored to CAS. The exploration is on the basis that within the characteristics of the CAS, there are insights related to the leadership process (Rosenhead et al., 2019).

Uhl-Bien et al. (2020) define specific leadership processes across multiple systems; however, Wolfram Cox et al. (2022) articulate that the leadership processes are behaviours that emerge. Tourish (2019) presents an argument that will bridge the discussion to leader-follower dynamics. According to Tourish (2019), complex leadership offers a view that leadership is based on an individual role leader; however, leader-follower dynamics still need to be explored. The leadership process does not exist in isolation from followers (Oc et al., 2023).

The second section of the literature review introduces academic theory, which covers multiple dimensions of followers' impact on leaders and leadership. Leader-follower theory ranges from an evolutionary perspective to leadership models, demonstrating that leading and following are social constructs that shift between individuals (Oc et al., 2023).

Role-based views provide an understanding of the attributes of leaders and followers and how the quality of their relationship can hinder or benefit the leadership process in CLT (Uhl-Bien et al., 2014). Evolutionary views highlight that organisations are not structured to take advantage of individual evolutionary leader-follower social constructs that are ancestrally flexible and adaptive, which is a better fit for leadership of emergence (Oc et al., 2023). Constructive approaches demonstrate that leadership is cocreated and relational; this fits in with CLT articulation of the leadership process that enables adaptive outcomes (Wolfram Cox et al., 2022).

This research project is an explorative study, and the paradigm selected provides insights into the follower perspective of leader-follower dynamics in an assumed CAS. This research report collected followers' testimonies and explored additional insights that could contribute to the academic literature on CLT and organisations facing complexity. The research question to achieve this aim is articulated in Chapter Three, and the details of the qualitative research methodology are covered in Chapter Four.

CHAPTER THREE: RESEARCH QUESTIONS

3.1 Introduction

Bryman et al. (1996) articulate the value qualitative research can add to leadership studies; this aligns with the researcher's motivations for selecting a qualitative research design for this research report. Qualitative research allows for the exploration of context and insights into leadership behaviours; quantitative methods would not easily capture the unique perceptions and experiences of the individuals in a complex adaptive system (Bryman et al., 1996).

For a research study to achieve its objective, a well-formulated research question is required to establish clarity and direction of the study (Braun & Clarke, 2021). According to Bell et al. (2019) the research question is a statement that articulates what the researcher intends to explore. In line with this definition, the principal research question of this research report is: **What are the lived experiences of followers within the context of a complex adaptive system during periods of disruption and adaption?**

The principal research question is an acceptance of the invitation by Tourish (2019) that more in-depth research on the dynamics between leaders and followers can offer additional theoretical contributions to CLT.

The academic literature in Chapter Two is the basis for the researchers' curiosity to explore whether followers can offer additional insights into understanding the leadership process articulated in CLT.

The principal research question is broken down into four research sub-questions that are outlined in the sections below:

3.2 Research sub-question one

What do followers observe in their work environment during periods of disruption and adaptation in a complex adaptive system?

Sub-research question one explores disruption and adaptation in a CAS from the followers' perspective. CLT is anchored on attributing business ecosystems with the properties of a CAS

as defined by complexity theory (Rosenhead et al., 2019). CAS functions at the edge of chaos and can respond to external changes due to its ability to organise itself. They create new patterns or outcomes that did not exist before, resulting in adaptation and innovation (Schneider & Somers, 2006). The researcher intends to explore whether followers observe similar characteristics within the research setting mentioned in Chapter One.

3.3 Research sub-question two

How do followers perceive leadership during disruption and adaptation in a complex adaptive system?

Leadership complexity theories have wide-ranging literature articulating how leadership can influence organisations to adapt to disruptions; they articulate the principles and practices leadership can apply to impact adaptation deliberately (Rosenhead et al., 2019). Uhl-Bien & Arena (2018) and Rosenhead et al. (2019) articulation that complexity leadership is a process has informed the aim of the research sub-question, which is to explore potential insights from followers' perceptions of their lived experience of the leadership process within a CAS.

3.4 Research sub-question three

What are followers' experiences of leadership and team dynamics during disruption and adaptation within a complex adaptive system?

The leader-follower dynamics informs research sub-question three constructs covered in Chapter 2. The study of followers in leadership theory has shown that followers offer new perspectives on understanding leadership, given their impact on leader-follower dynamics (Oc et al., 2023b). The third research sub-question aims to understand followers' experience of the leader-follower dynamics phenomenon to determine whether it offers additional insights into the leadership process in a complex adaptive system.

3.5 Research sub-question four

What are the personal reflections of followers regarding their roles during disruption and adaptation within a complex adaptive system?

Academic literature discussed in Chapter Two explains that leadership in a CAS is a process, and any individual can engage in it to influence the organisation to adapt (Rosenhead et al., 2019). The interaction of leaders and followers defines the leadership process, and the self-organising characteristics of a CAS enable this process to emerge and influence adaptive outcomes (Wolfram Cox et al., 2022). Research sub-question four aims to explore leadership emergence from the perspective of followers.

3.6 Conclusion

The research questions in Chapter Three are based on the academic literature reviewed in Chapter Two. The research design and methodology that will answer the principal research question will be presented in Chapter Four.

CHAPTER FOUR: RESEARCH DESIGN AND METHODOLOGY

4.1 Introduction

This chapter discusses the research design and methodology selected to answer the research question in Chapter Three. This research report is a study on leadership and examines its contextual factors, which are well-suited to qualitative research (Bryman et al., 1996).

4.2 Philosophical foundations

Phenomenological research has its origins in philosophy. Its philosophical origins provide a foundation for the research design selected by the researcher. Given the range of empirical approaches within phenomenological research, appreciating these roots is beneficial (Wilson A, 2015). Its origins trace back to the early twentieth century from the work of the philosophers Husserl (1895-1939) and Heidegger (1889-1976) (Wilson A, 2015). Numerous writers have published on phenomenology from multiple fields, including education and the health sciences (Creswell et al., 2007). The core underlying philosophy of phenomenological research is studying people's conscious experience of their daily lives as they understand it and ascribe meaning to it (van Manen, 2016) .

4.3 Research design

The research project aimed to understand if followers, who often have a unique perspective on leadership, perceive the phenomenon of leading in complexity and explore their account of how they experienced leader-follower dynamics in this context. Phenomenological research design fits the requirements for a study that seeks to understand the lived experience of a phenomenon individuals experienced, and the intention was to determine if there were underlying themes among all the individuals who experienced the phenomenon (Gill, 2014).

4.4 Methodology

The research methodology selected was qualitative, and the research design was phenomenological. The data collection method was done utilising one-on-one semi-structured interviews with middle managers and professionals who worked in the financial services industry in SADC during the peak of the COVID-19 pandemic (Bell et al., 2019). The research methodology is particularly relevant to the context, as it aims to understand the lived

experience of followers in an environment of disruption within a CAS as defined by CLT (Rosenhead et al., 2019).

4.5 Research setting

The research question in Chapter Three is explorative, and it aims to understand followers' experiences of leader-follower dynamics as the organisation adapts to disruption. The phenomenon being studied determined the methodology, participants, and setting (Maxwell, 2012). The researcher identified the SADC financial sector as the research setting during the peak of COVID-19.

The impact of COVID-19 on the SADC financial sector banking during the peak of the pandemic introduced complexity, and organisations had to adapt to continue as profitable entities; the setting meets the characteristics of a CAS (Miller et al., 2022). The choice of setting contributed to the likelihood of identifying participants who experienced the phenomenon defined in the research question (Groenewald, 2004). The lived experience of followers in this setting provided data to answer the principal research question.

4.6 Unit and level of analysis

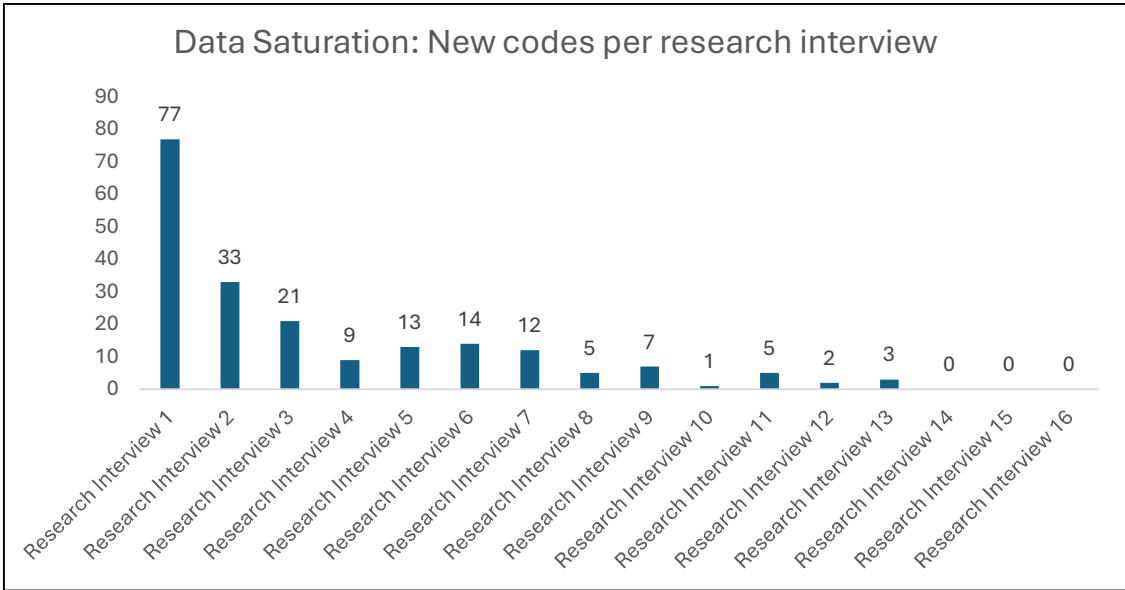
This research report aimed to explore the lived experience of the phenomenon of leader-follower dynamics by followers within the context of a CAS. To achieve this within the selected research setting, the lowest unit of analysis chosen was middle managers and professionals from multiple departments within the financial services industry in SADC (Bell et al., 2019). The justification for this unit of analysis was informed by the research design (Bell et al., 2019). A phenomenological research design seeks to understand the lived experience of persons and the phenomena they experience (Creswell et al., 2007). Therefore, the unit of analysis was at an individual human level; however, the phenomenon was shared (Groenewald, 2004).

4.7 Sample method and size

The sampling method that supports a phenomenological research study is purposive sampling (Hycner, 1985). It ensured that the selected participants met the criteria of followers who have been through the phenomenon of leader-follower dynamics (Hycner, 1985). The research

question informed the purposive sampling (Bell et al., 2019). Creswell et al. (2007) recommend selecting five to twenty-five interview participants for a phenomenological research study to reach saturation. The number of interview participants selected was sixteen participants. Interview chosen participants were based on the researcher's knowledge, research question, and setting. Interview participants were middle managers and professionals in follower roles working in the financial services industry within the SADC region during the peak of COVID-19. Figure 4 below confirms that sixteen participants were sufficient, there were no additional codes beyond 13 research participants and data saturation was reached (Saunders et al., 2018).

Figure 4: *Unique new codes per participant*



Note. The researchers' compilation of unique codes generated per research participant to demonstrate data saturation

The selected participants were in follower roles based on their organisational structure. Part of the screening and sampling process included confirmation that they were in a department that implemented a new process or product during the pandemic; this sampling criterion was intended to increase the likelihood that the interview participants experienced the phenomenon of leader-follower dynamics in a complex adaptive system (Maxwell, 2012).

The researcher used their network to identify the middle managers and professionals. The researcher contacted research participants and invited them to participate in the research interviews in their personal capacity and share their lived experiences of leader-follower

dynamics during the peak of COVID-19. The researcher guaranteed the research participants' confidentiality by anonymising their names and including their company names in the research report. Table 4 below lists the research participants interviewed during the data-gathering process. The research participants' names have been anonymised by naming them research participants using an alphanumeric code to protect the identity of the research participants.

Table 4: *List of research participants that were interviewed*

ID	Participant Identifier	Analysis Group	Role in organisation
D1	Research Interview 1	Operations support team- Enabling operations	Operations support manager
D4	Research Interview 4		Compliance manager
D9	Research Interview 9		Operations risk manager
D12	Research Interview 12		Head of human resource
D15	Research Interview 15		Project manager
D2	Research Interview 2	Operations-Stabilising Operations	Operations manager
D3	Research Interview 3		Operations team leader
D5	Research Interview 5		Operations manager
D6	Research Interview 6		Head of regional operations
D7	Research Interview 7		Operations manager
D8	Research Interview 8	Product- Growth and product management	Product manager
D13	Research Interview 13		Risk manager
D14	Research Interview 14		Product manager
D16	Research Interview 16		Head of marketing
D10	Research Interview 10	Technology team- Technology build	Head of information systems
D11	Research Interview 11		Business analyst

Note. The researchers' compilation of the interview list

4.8 Research Instrument

The research instrument used for this report was a semi-structured interview questionnaire that collected data at the individual unit of analysis (Bell et al., 2019). Phenomenology research aims to understand an individual's lived experience based on their account of the phenomenon (Wilson A, 2015). The semi-structured interview guide consisted of ten questions and three sections.

The first question was the greeting and formalities of consent. The second question was an orientation to the interviewee about why the interview was happening and confirmed that they understood the recruitment criteria (Josselson, 2013). The following seven questions are related to the research sub-questions aimed at apprehending the phenomenon. There were also informal prompting questions (Josselson, 2013). The last question probed for additional

input, and the participant was thanked. The research instrument used in this report is Table 5 below.

Table 5: *Research instrument used in this study*

Questions	Purpose
Greetings and confirmation of consent. - Do you have any questions about the consent form you signed? - Do you have any other questions before we begin?	Introduction
Confirmation and invite for questions regarding the research and interview. What are your initial thoughts about this research topic?	Align on purpose
What were daily activities during COVID-19? How did you translate direction from your leaders into a plan? Probing questions: - Can you give an example of a specific directive you received and how you acted on it? - Were there any challenges you faced in translating these directions into action?	Confirming follower role
How did COVID-19 affect you at work? Probing questions: - Can you describe a typical day for you during the pandemic? - How did these changes impact your performance and productivity?	Research sub-question 1
How did you and your team manage the crisis? Probing questions: - What specific steps did your team take to adapt to the crisis? - How did communication and ways of working within your team change during this period?	Research sub-question 1
What was your perception of leadership in your organisation during this time? Probing questions: - How did leadership behaviour impact your morale and motivation? - Were there any actions by leadership that stood out to you? - How did their decisions affect your view of their leadership?	Research sub-question 2
What was your perception of your role during this time? Probing questions: - How did your responsibilities change during the pandemic? - Did you feel significant in your role during this period? - How did your sense of responsibility evolve over time?	Research sub-question 4
How did you experience the relationship with leadership during the crises? Probing questions: - Can you describe any memorable interactions with leadership? - Did your relationship with leadership change as the crisis progressed?	Research sub-question 3
How was it after the crisis? Probing questions: - How did your work environment and responsibilities change post-crisis? - What lasting effects, if any, did the crisis have on your role and team? - How do you perceive leadership and your role now compared to before the crisis?	Research sub-question 4

Thank you for your participation. • Is there anything else you would like to add about your experience? • Do you have any final thoughts or reflections on this topic?	Conclusion
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Note. The researchers' semi-structured interview guide

4.9 Data gathering process

Once ethical clearance was received, the researcher sent invites to each research participant. The ethical clearance approval can be found in Appendix A. The interviews were scheduled on the Google Meet platform. Before the interview, each participant was requested to sign a consent letter; an example of the consent letter can be found in Appendix C. The consent letter informed the research participants of the technicalities of what they agreed to by agreeing to participate in the interview. Signing the consent letter ensured that the research report complied with ethics requirements.

The interviews were conducted via video call on the Google Meets platform. Each interview was recorded with permission from the research participants. They lasted 45-120 minutes and used a semi-structured interview guide to collect the required data.

The researcher transcribed the interviews' recordings so that ATLAS.ti could analyse the data. All research participant identifiers were removed from the transcripts. A web-based tool called Otter.ai was used to transcribe the recordings.

All data collected from the interviews was stored in a cloud drive accessible by a Windows authentication key. The researcher maintains a yearly subscription with Microsoft; the package includes access to One Drive cloud storage. This will ensure that the data is protected from being on personal computers or hard drives, as these can be stolen or subject to the risk of data loss if replaced. The researcher also acquired backup storage provided by a subscription to the Google One platform; the research data will be backed up to this location. Google One delivers a minimum amount of free storage, which will help mitigate the affordability risk over time should researchers no longer earn any income.

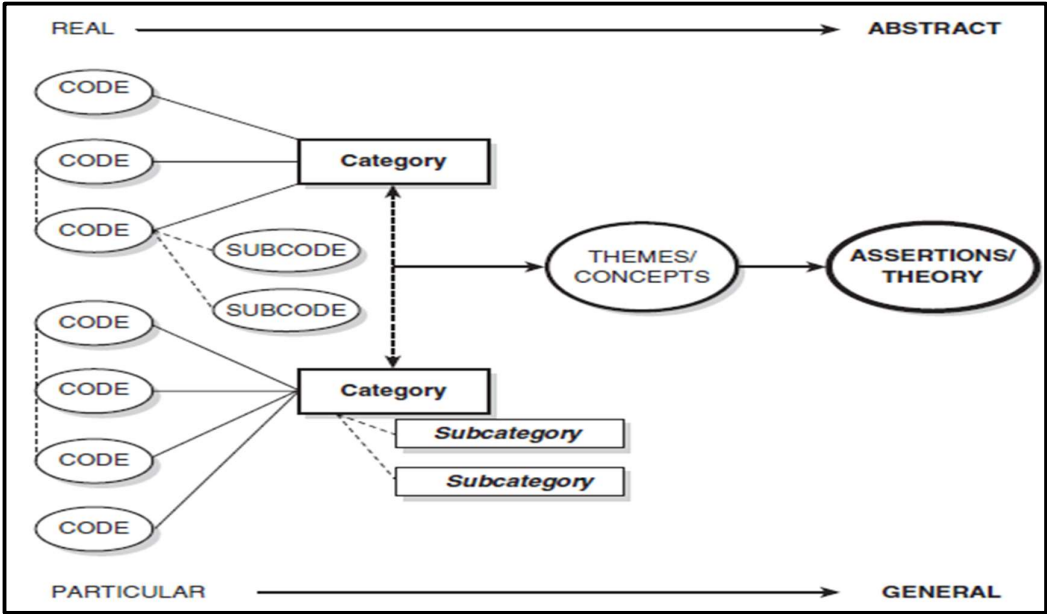
4.10 Data analysis approach

The proposed analysis method is the simplified Hycner method; there are multiple analysis options for phenomenological study, and the Hycner method appeared due to its simplicity

(Hycner, 1985). The first step of the method was the bracketing and phenomenological reduction to separate the researcher's interpretations and listen directly to the participants' input (Hycner, 1985). The second step was delineating meaning units and identifying statements that identify phenomena (Hycner, 1985). The third step was clustering units of meaning into themes (Hycner, 1985). The fourth step was summarising each interview (Hycner, 1985). The final step was a composite summary of all the general and unique themes (Hycner, 1985). Atlas. ti software was utilised to support this process

An inductive approach was utilised to derive first-level codes using ATLAS.ti. The deductive approach was used to consolidate themes and map to the research sub-questions. Figure 5 below presents the analysis approach to map the derived themes from codes to the research questions (Saldaña, 2013).

Figure 5: Code to theory model for a qualitative inquiry



Note. This figure was produced by Johnny Saldana, showing a streamline of the code-to-theory model for qualitative inquiry. From “The Coding Manual for Qualitative Researchers,” by J. Saldana, (p.13), 2013, Sage (2013). Copyright 1996 by Forest Stewardship Council.

Table 6: Summary of data analysis

Codes generated	202
Categories /Sub-themes	14
Themes	5
Research sub-questions (Theory)	4

Note. The researchers’ summary of codes, themes and theory

Table 6 above is a list of outputs from the data analysis process. The data analysis resulted in 14 sub-themes and five main themes mapped to 4 research sub-questions. The mappings are presented in Chapter Five.

4.11 Research quality and rigour

Research quality and rigour criteria in qualitative research are reliability, confirmability, credibility and transferability (Bell et al., 2019). Table 7 summarises how quality and rigour were addressed in this research report.

Table 7: *Research report quality and rigour*

Criteria	Steps to address quality and rigour in the research methods and data
Reliability	•Data triangulation between research participant analysis groups •Findings and academic literature comparison in the Discussion chapter (Chapter 6)
Confirmability	•Recorder interviews stored on private access cloud storage in line with ethics clearance requirements •Interview transcripts edited to remove identifiers uploaded to GIBS repository
Credibility	•Literature review that includes highly rated journals •Sample size that demonstrates data saturation •Data analysis support by methodology literature
Transferability	•Consistency matrix including core literature •Purposive sampling informed by the research question to limit researcher bias in selection criteria •Research findings in Chapter 5 supported by quotes (evidence)

Note. This table was compiled by the researcher and adapted from (Bell et al., 2019) chapter on research designs. From “Business Research Methods,” by E. Bell, A. Bryman and B. Harley, (p.39-40), 2013, Oxford University Press (2019). Copyright 2019 by Bell, Bryman and Harley.

4.12 Ethical considerations

The data-gathering process adhered to the ethical clearance conditions required by the GIBS Research Ethics Committee. The conditions included signing and completing consent letters before interviewing research participants, removing participant identifiers from the research report and transcripts, and articulating to research participants that interviews are voluntary and that they can stop the interview process should they be uncomfortable.

4.13 Research design and methods limitations

One limitation of this research design is that it is the researcher's experience executing a qualitative study. The researcher had limitations regarding experience in implementing data gathering and analysis. The researcher mitigated this by following steps articulated in the methodology literature, attending workshops made available by GIBS, and working with their allocated supervisor for guidance.

A phenomenological approach can make participants uncomfortable as it expects them to be open about sharing their lived truth; this could have limited the amount of information they were willing to share. The researcher mitigated this by being sensitive to participants' cues to address their discomfort and reminding them that their identifiers would be anonymised in the report. The researcher also applied guidelines from Josselson (2013) creating an open interview engagement allows research participants to share their narratives.

Purposive sampling selected research participants from the financial sector in the SADC based on the sample design. The limitation of using a research design with phenomenological philosophical foundations is that the results cannot be generalised to apply to other research settings, such as a different industry or source of disruption.

4.14 Conclusion

Chapter Four outlines the methodology and design selected by the researcher to answer the principal research question articulated in Chapter Four. It also outlines the research design's philosophical foundations, setting, sampling method, data gathering, and analysis. Chapter Five includes the findings using this chapter's research design.

CHAPTER FIVE: RESEARCH FINDINGS

5.1 Introduction

This chapter contains the research findings from the qualitative research study articulated in Chapter Four. The study was conducted using a semi-structured research interview mechanism with 16 interviews. Each interview was transcribed and analysed using an inductive interpretive approach to identify categories and themes from multiple codes drawn from the transcripts.

5.2 Presentation of findings

The research study aimed to examine the lived experience of followers in the context of a complex adaptive system during periods of disruption. Using the research mechanism of a semi-structured interview, data was collected in the form of an interview transcript. The researcher applied an interpretive inductive analysis method, as described in Chapter Four, to the experiences and narratives shared by the interview participants. As a result, the researcher identified the categories and themes listed in Table 8.

The researcher identified 202 descriptive codes (see Appendix B) from the lived experiences shared by the research participants; the codes were then grouped into 14 first-order categories and then clustered into five emergent themes.

Table 8: *Categories and themes from transcript analysis*

Categories	Themes	Sub-Question
Disruption business impact	Impacts of disruption	One
Disruption countermeasures		
Positive outcomes of disruption		
Care for employees	Leadership and Organisational Attributes	Two
Leadership Qualities		
Communication		
Team dynamics	Group and Leadership Dynamic	Three
Adverse leader-follower dynamics		
Positive leader-follower dynamics		
Follower Ambitions	Role Perceptions	Four
Role Expansion		

Personal impacts of disruption	Follower Personal Experience	Four
Emotive Impacts		
Follower Growth		

Source: The researcher's analysis

The research interview participants were divided into analysis groups based on their professional roles (see Table 9). The intention of grouping the participants is to explore if any additional patterns emerge from participants in similar professional roles. Analysing research participants based on groups introduces additional dimension insights into the data collected from participants.

Table 9: *Research participant groups*

ID	Participant Identifier	Group
D1	Research Interview 1	Operations support team-Enabling operations
D4	Research Interview 4	
D9	Research Interview 9	
D12	Research Interview 12	
D15	Research Interview 15	
D2	Research Interview 2	Operations-Stabilising Operations
D3	Research Interview 3	
D5	Research Interview 5	
D6	Research Interview 6	
D7	Research Interview 7	
D8	Research Interview 8	Product- Growth and product management
D13	Research Interview 13	
D14	Research Interview 14	
D16	Research Interview 16	
D10	Research Interview 10	Technology team- Technology build
D11	Research Interview 11	

Source: The researcher's analysis

The findings will be presented in themes, and each category will be discussed using verbatim extracts of the quotes from the transcripts as supporting evidence. Each theme discussion will include within-group and between-group analysis to identify similarities and differences, which will be summarised in the conclusion section.

5.2.1 Theme One: Impacts of Disruption

The categories in this theme are the research participants articulating the impacts of disruption they observed, including their account of transitioning to adaptation within complex adaptive systems.

5.2.1.1 Disruption business impact

Research participants observed and went through business impacts during the period of disruption. Table 10 is a summative view of the business impacts observed by research participants in all the analysis groups. The number of quotations coded determines the heat map in Table 10.

Table 10: Consolidated view of disruption business impact codes for all research participants

Disruption business impact	Heat Map		
o DBI behavioural challenges from employees			Red
o DBI challenging operational implications of disruption	Green		
o DBI changing customer expectations and business requirements			Red
o DBI chaos as a result of disruption		Yellow	
o DBI complexity to everyday tasks due to disruption		Yellow	
o DBI customer experience was negatively affected by disruption			Red
o DBI disruption affected the historical focus on planning and tactics			Red
o DBI disruption affecting ability to service customers			Red
o DBI disruption also created anxiety in customers regarding their level of service			Red
o DBI disruption causes an absence of official leadership structure			Red
o DBI disruption resulted in employees losing their jobs			Red
o DBI disruption resulting in constant change and new working groups			Red
o DBI disruption resulting in multiple leadership changes			Red
o DBI disruption results in new entrants and competition			Red
o DBI disruption results in two centres of power affecting decision making			Red
o DBI focus on sales has been lost and disruption has impacted future performance			Red
o DBI higher levels of intensity experienced during disruption		Yellow	
o DBI impact to business performance as a result of disruption		Yellow	

o DBI making decisions and repeatedly reversing them			
o DBI Missing visibility of performance in the period of disruption			
o DBI previously productive individuals productivity affected by the new environment created by disruption			
o DBI priorities are affected by disruption			
o DBI Reporting is not consistent and is erratic			
o DBI the nature of the disruption resulted in an unpredictable work environment			
o DBI the way forward is not clear due to the existing disruption			
o DBI ways of working affected by disruption especially communication			
Number of quotations	High	Medium	Low

Source: The researcher's analysis

5.2.1.1.1 Chaos

Evidence

Research participants in all four analysis groups a) Operations support team-Enabling operations b) Operations-Stabilising Operations c) Product- Growth and product management d) Technology team- Technology build had similarities in articulating the chaos they experienced due to disruption.

“No, it was definitely not a smooth one. Because, remember, in South Africa, we had a number of issues. Even though we had covid, we had unstable telecom. We saw the unstable Eskom, which impacted a lot of people, .” (Research Interview 4, D4).

“I remember the day that they announced there's a lockdown. And you know, you almost had this countdown like change. It almost felt like you were given a day to sort everything out. And to be quite honest, it was chaos” (Research Interview 5, D5).

“Yeah, it was, it was chaotic. So I think for me, with my manager, I had to use teams a lot. . (Research Interview 13, D13).

Summary

Research participants in operational a, support and technology teams articulated that when the national lockdown was announced based on the rate of COVID-19 spreading, they experienced chaos in their day-to-day work environment. Not only could they no longer work as they used to, but the country was also experiencing infrastructure challenges that added

additional challenges to performing their daily duties. In summary, everything felt chaotic and sudden, and it disrupted previous ways of working.

5.2.1.1.2 Operational impacts

Evidence

Research participants in all four analysis groups also articulated the disruption resulted in them having to manage challenging operational impacts:

“And in the past, you You rely a lot on the human relation, you know, suddenly you've got to change how you think, and suddenly these screens that are sitting here become my biggest source of information.” (Research Interview 4, D4).

“I remember sometime in March, and we were looking at a switch at the time, I think we were in the range of about 300 to 400 advisors that we had to get to work from home in a day. So we had to source laptops, source assets. I mean, at the time, we were not working off laptops. Working off our entire suite was on desktops.” (Research Interview 5, D5).

Summary

Research participants in operational, support, product, and technology teams shared that they faced challenging operational impacts. Overnight, they had to enable many operational staff to work from home; working from home required a change in the asset's frontline use, and they had to rely on their access to internet connectivity. This exposed the business to the personal limitations of its employees. Support staff that could no longer monitor individuals face-to-face and required technological solutions to fulfil the same tasks virtually.

5.2.1.1.3 High levels of intensity

Evidence

Experiencing high levels of intensity is also an experience that was shared by research participants in all four analysis groups:

“So for me, the impact, I mean, instead of working eight hours, you're working 12 hours because, and it's not something that you're consciously making a decision on, but it's, you know, now we're connecting that.to say, Damn, I think I was giving more because I was trying to be to make sure that my work speaks for me. .” (Research Interview 4, D4).

“, as a company, you know, 6am meetings, up to 8pm meetings. It was just, it was just not sustainable. I'm sure you can remember that covid Relief loan” (Research Interview 2, D2).

“how we worked, especially the first 4-5-6, weeks. Yeah, we were Yes, we were crazy, working hours like back to back, the whole day, and you just had stamina for it somehow. Because I guess we just knew we had to do this. We had to do it. ” (Research Interview 11, D11).

Summary

Research participants across all the analysis groups articulated that when the disruption occurred, they increased the intensity of their daily workday to try and cope with the impacts it created. Some of them articulated that the motivation to work longer hours was based on a concern of not being visible in the new ways of working virtually, and they needed to demonstrate their relevance.

Some of the research participants articulated that they were conscious of the fact that they had to urgently work longer hours to solve the operational challenges created by disruption. Product teams had to launch a new product to prevent the business from severe income statement impacts; the product had never been made before and required a higher frequency of meetings, engaging a more comprehensive network of stakeholders and longer meetings to develop a new product within a time that historically took a longer time frame. This created heightened levels of intensity.

5.2.1.1.4 Ways of working changed, especially communication

Evidence

Research participants in all four analysis groups also articulated that their ways of working especially communication was affected by disruption:

“We'd get information from like, maybe higher ups in the business, and it will come streaming down. And we would use that to go, like WhatsApp, to communicate to people changes in ways of working, ” (Research Interview 1, D1).

“You know, now, now that we're remote, there had to be a much, much more deliberate process of communication, because we weren't seeing each other” (Research Interview 3, D3).

“We anyone could communicate with anybody in any way about anything, and things were so urgent that no order was necessitated around that if you were missed.”(Research Interview 8, D8).

Summary

Research participants in the four analysis groups articulated a sudden change in ways of working, particularly communication. Virtual communication replaced face-to-face communication, and participants articulated that they had to be deliberate and purposeful in communication because the benefit of being next to colleagues was no longer available. Communication platforms with larger groups created a fast pace and quantity of communication, and it was possible to miss important information. Adopting communication platforms after the disruption created better access between senior leadership and frontline staff.

5.2.1.1.5 Disconnection to colleagues

Evidence

Research Interview 11 (D11) articulated the change in ways of working as something that caused the team to be less connected than before the disruption:

” . We were quite close being at the office. We sat together. We would often do a lot of like informal ops, visit together and bounce ideas. We really, really separated when working from home.”

Summary

A research participant in the operations support team articulated that when the disruption occurred and the teams had to work virtually, the team was no longer connected. Historically, everyone in the team used to be in the same office. The proximity created a connection between them, facilitating a close relationship, which they expressed is challenging to maintain when working virtually from home.

5.2.1.2 Disruption countermeasures

Research participants took countermeasures to manage disruption. Table 11 is a summary view of the countermeasures research participants took in all the analysis groups. The number of quotations coded determines the heat map in Table 11.

Table 11: *Consolidated view of disruption countermeasures codes for all research participants*

Disruption countermeasures	Heat Map		
◦ DCM Attempts at early innovation in the absence of disruption was slow to adopt due to lack of urgency			
◦ DCM Being resourceful and resilient to find solutions to disruption			
◦ DCM business resilience to disruption and crisis			
◦ DCM clarity of expectations from leadership during disruption			
◦ DCM commitment from individuals to overcome disruption			
◦ DCM create stability in face of disruption and chaos			
◦ DCM culture of an organisation that requires innovation helps manage disruption			
◦ DCM deliver business requirements during disruption			
◦ DCM disruption can increase the importance of every day decisions			
◦ DCM disruption resulted in investment in new technologies			
◦ DCM ensure operating environment is enabled to function during disruption			
◦ DCM follower expresses acknowledgement there will be change			
◦ DCM implementing boundaries to limit impact of disruption on personal lives			
◦ DCM implementing practices to cope with the impacts of disruption			
◦ DCM leader provides guidance on prioritisation during disruption			
◦ DCM leadership experience and relevance of department makes things easier			
◦ DCM leadership providing direction in the chaos caused by disruption			
◦ DCM learning and adapting to overcome the implications of the disruption			
◦ DCM learning to work differently due to disruption			
◦ DCM perspective of yourself should be open to change to adjust to disruption			
◦ DCM pre-planning to prepare for disruption to ensure operational stability			
◦ DCM prepare for disruption is a key take out from followers			
◦ DCM reassuring customers that disruption will not affect their service level			
◦ DCM recontracting to prioritise what will add value because of disruption			
◦ DCM refer to existing networks outside of organisation to get a sense of disruption			
◦ DCM resilience to overcome disruption is inherent in the culture of the country			
◦ DCM role was not different during disruption only change was ways of execution			
◦ DCM shift focus back to getting the business performance to improve			
◦ DCM silos between team members were deliberately removed in order to manage disruption			
◦ DCM support from different departments to solve for disruption.			
◦ DCM technology departments thrive under disruption			
Number of quotations	High	Medium	Low

Source: The researcher's analysis

5.2.1.2.1 Learning and adapting to overcome the implications of disruption

Evidence

Research participants from the four analysis groups a) Operations support team-Enabling operations b) Operations-Stabilising Operations c) Product- Growth and product management d) Technology team- Technology build articulated how they had to learn and adapt to overcome the implications of disruption:

“But you also needed to get leaders and force leaders and help them to actually step up to say it, this is not the norm. We operate in the world of unknown. Let's fail fast and learn quickly” (Research Interview 12, D12).

“but it was tough in the beginning, but then through experience and understanding and accepting that the world has changed and we need to also change, we then accepted and started working to the level that the new level,” (Research Interview 7, D7).

“I actually, I realized that change is hard, change is very difficult, and changes exposes a lot of other underlying issues that we're dealing with. We all had to be alone, if I may put it that way, and work wise, I think I've adapted, .” (Research Interview 14, D14).

Summary

Research participants in all the analysis groups articulated that they had to learn new ways of doing things to adapt to the disruption. There were also expressions from research participants that change was difficult, but they had to deliberately embrace a new way of working. One of the research participants from the operations support analysis shared an interesting articulation that they have no choice but to adapt; however, what is required is unknown, and they can't rely on the stability of old working methods. They acknowledge that they need a mindset to accept the discomfort of change without a clear roadmap of what they need to do.

5.2.1.2.2 Restoring business performance

Evidence

Research participants in the analysis groups a) Operations support team-Enabling operations b) Operations-Stabilising Operations c) Product- Growth and product management shared how they shifted focus on restoring business performance after the disruption:

“Because we need to now start moving into the direction where we need to go as a business. And how do we get back on that road? We might not be where we were, but we need to start getting on the road to get there again.” (Research Interview 1, D1).

“Let’s focus on the performance. Let’s see where we are and and we haven’t been back to where we were pre covid.” (Research Interview 2, D2).

“So xxxx, the xxx entity, used to carry the rest of the business, but it’s no longer doing that. Suddenly, they’re making we’re making losses. Suddenly we’re making losses, losing market share. Clearly losing market share.” (Research Interview 16, D16).

Summary

Research participants articulated that they needed to focus on improving business performance. In the process of adapting, some of the research participants expressed the motivation to correct the impact on business performance. It was not enough for the participants to get through the disruption they also had to work toward lifting business performance.

5.2.1.2.3 Pace of innovation increased after disruption

Evidence

Research participants in the Operations support team-Enabling operations and Operations-Stabilising Operations analysis groups reflected on how attempts at early innovation were slow and how the pace of innovation increased after disruption:

“But remember, from an organization perspective, we were already testing the work from home concept, and it wasn’t working well.” (Research Interview 12, D12).

“we were talking about working from home for two years, you know, and then trying to plan, how are we going to do it?” (Research Interview 7, D7).

Summary

Research participants from operations and operations support analysis groups highlighted that before the disruption, there was an attempt to introduce innovation. Still, the pace of adoption and implementation could have been faster. Post-disruption, the innovation of migrating the

operating environment to become a hybrid of virtual and office-based happened very quickly compared to previous attempts when there was stability.

5.2.1.2.4 Leadership played a role in providing direction during disruption

Evidence

Research participants in the analysis groups a) Operations support team-Enabling operations b) Operations-Stabilising Operations c) Technology team- Technology expressed how leadership played a role in providing direction during the chaos of disruption:

“So I think that was definitely almost like as a leader, to give my team that okay, it's okay that you're not going to do 100% of everything” (Research Interview 1, D1).

“how we had a leader that was able to to get us into a room, slow things down, have conversations, allow us to plan, give us direction” (Research Interview 5, D5).

“I think the way that the leaders embraced now, I'm talking of both our business unit and the group, the way that they embraced this change and just ran with it. And just they were positive.” (Research Interview 11, D11).

Summary

Research participants in the three analysis groups, which included operations, operations support, and technology roles, articulated that the role played by a leader helped their team manage the disruption. They also articulated that their leader played an essential role in creating the environment to find composure as a team to adapt to disruption. The buy-in from leadership that change was required helped, and their positivity motivated the research participants to adapt to the disruption.

5.2.1.2.5 Investing in technology to adapt to disruption

Evidence

Research participants from the Operations support team-Enabling operations and Technology team- Technology build analysis groups expressly referred to investing in technology to adapt to disruption:

“Went to Israel for technology, which allowed us to to have, you know that that visibility from the distance currently, my role, which was which relied on the human relation relation.” (Research Interview 4, D4).

“yeah, it puts a lot of pressure on you, because the Tech has to work right for so that there's no excuse that we can't meet our numbers, or we can't enable certain functionalities, or we can't service our customers because of the technology” (Research Interview 10, D10).

Summary

Research participants in operation support and technology roles articulated that investing in new technology was essential to help with adapting to disruption. The nature of disruption required technology implementation to work virtually and enable customers to get access to services.

5.2.1.3 Positive outcomes of disruption

Research participants shared the positive outcomes they experienced from disruption. Table 12 is a summative view of the positive outcomes shared by research participants in all the analysis groups. The number of quotations coded determines the heat map in Table 12.

Table 12: Consolidated view of positive outcome of disruption codes for all research participants

Positive outcomes of disruption	Heat Map		
o POD disruption creates innovation and organisational resilience	High	Medium	Low
o POD disruption generated new perspective on previous held assumptions	Medium	High	Low
o POD disruption introduces a need for innovation and it can come at different paces	High	Medium	Low
o POD focus and urgency to deliver outcomes during disruption	High	Medium	Low
o POD identified positives from the implications of disruption	Medium	High	Low
o POD innovation to help the customer	High	Medium	Low
o POD productivity levels increased due to new working conditions caused by disruption	Medium	Medium	High
o POD the way the organisation managed disruption created loyalty	Medium	High	Low
Number of quotations	High	Medium	Low
	High	Medium	Low

Source: The researcher's analysis

5.2.1.3.1 New perspectives on previously held assumptions

Evidence

Research Interview 3 (D3) from the Operations-Stabilising Operations analysis group articulated how disruption gave a new perspective on previously held assumptions:

“And so for me, that was really it just showed that there was more to to the business than just, you know, output and KPIs, but there was an empathy and the people perspective as well, you know, some fine balance”

Summary

Research participants from the operations analysis group articulated that they changed their perspective on being open to doing things differently. The disruption introduced a new context that changed their previous views, making them more open to adopting new ways of working.

5.2.1.3.1 Disruption created focus and urgency

Evidence

In addition to new perspective, research participants within the Operations-Stabilising Operations analysis group also shared the following on how disruption created focus and urgency the business needed:

“You know, prior to then, if you told me, in a day or two, we'd need to get 400 people working from home, 400 people I I'd say to you, jeez, ” (Research Interview 5, D5).

“we had to put a lot in place on, how do we shut down a business, and how do you move the staff and the complexities with that, where do you operate?” (Research Interview 6, D6).

Summary

Research participants in the operation analysis groups articulated how the impacts of disruption motivated them to take steps for adaptation urgently. The disruption of the national lockdowns created immediate pressure in the operational environment, creating an urgency for action to adopt new ways of working.

5.2.1.4 Analysis of Research Groups

Table 13: *Theme one research analysis groups similarity mapping*

	Operations support team- Enabling operations	Operations-Stabilising Operations	Product- Growth and product management	Technology team- Technology build
Operations support team- Enabling operations		Disruption to business impacts Disruption countermeasures Positive outcomes of disruption	Disruption to business impacts Disruption countermeasures	Disruption to business impacts Disruption countermeasures
Operations-Stabilising Operations	Disruption to business impacts Disruption countermeasures Positive outcomes of disruption		Disruption to business impacts Disruption countermeasures	Disruption to business impacts Disruption countermeasures
Product- Growth and product management	Disruption to business impacts Disruption countermeasures	Disruption to business impacts Disruption countermeasures		Disruption to business impacts Disruption countermeasures
Technology team- Technology build	Disruption to business impacts Disruption countermeasures	Disruption to business impacts Disruption countermeasures	Disruption to business impacts Disruption countermeasures	

Source: The researcher's analysis

Research participants in all four analysis groups articulated how disruption caused chaos, increased the intensity of their daily work routines, introduced operational implications they had to manage, and changed their ways of working, particularly communication. Research participants Operations support team-Enabling operations and Operations-Stabilising Operations analysis groups reflected on how disruption increased the pace of innovation, and together with the research participants in the Technology team- Technology build analysis group, they also shared the importance of leadership to manage the chaos of disruption.

Research participants in all four analysis groups articulated how they learnt and adapted to overcome disruption and shifted focus back to improving the business performance; however, this was not shared by research participants in the Technology team- Technology build analysis group. They did, however, highlight the importance of technology in solving disruption, given that it is their main daily focus. Research participants in the Operations-Stabilising Operations and Operations support team-Enabling operations reflected on how the pace of innovation was slower before disruption, and together with research participants in the Technology team- Technology build analysis group, they articulated the importance of leadership role in managing the chaos of disruption.

Research participants from the Operations-Stabilising Operations analysis group were unique in articulating how disruption provided new perspectives and created heightened focus and urgency to deliver outcomes.

5.2.1.5 Theme summary

Disruption introduces chaos that research participants have to manage, resulting in high intensity in their daily work routines as they manage the operational implications introduced by disruption. Their ways of working change, especially communication, and they learn and adapt to overcome the impact of disruptions.

Disruption creates implications; however, research participants were able to refocus on business performance. They also articulated that disruption helped increase the previously slower innovation pace. The role of leadership and its importance in managing chaos caused by disruption was also amongst the evidence from the research interviews, including how disruption introduced new perspectives notwithstanding creating focus and urgency to deliver outcomes.

5.2.2 Theme Two: Leadership and Organisational Attributes

The categories in this theme are the research participants' reflections on the attributes of their leaders and organisations during periods of disruption and adaptation in complex adaptive systems.

5.2.2.1 Care for employees

Research participants frequently mentioned the attribute of leaders who care for people in the context of a disruption that impacted personal lives. Table 14 is a summative view of the experiences of care shared by all research participants in the analysis groups. The number of quotations coded determines the heat map in Table 14.

Table 14: Consolidated view or care for employees' codes for all research participants

Care for employees	Heat Map		
o CFE a sense of safety that livelihood is not affected			High
o CFE an organisation that cares for its people		Medium	
o CFE leadership managing pressure and being aligned on prioritising the impacts to employees			High
o CFE people-orientated leadership that focuses on care for people	High		
o CFE prioritising the well being of employees during disruption			High
o CFE reflection on the importance of people and care		Medium	
o CFE striking the balance between caring for people and business performance		Medium	
Number of quotations	High	Medium	Low
	High	Medium	Low

Source: The researcher's analysis

5.2.2.1.1 People-centered leadership

Evidence

Research participants within the Operations support team-Enabling operations analysis group expressed positive sentiments about the leaders of their organisation being people-centered when dealing with a disruption that affected people's personal lives:

"I think I mentioned it like I honestly felt like the higher ups were were very empathetic and very supportive of what was happening. Like I remember, like I would sit and speak to friends and family, and I'd feel so proud to work with an organisation that put the people first" (Research Interview 1, D1)

A similar positive sentiment was identified from Research Interview 4 (D4) quote:

"I think, firstly, there was a decision of telling everyone to say, Listen here, as a bank, we have enough money. This covid goes on for the next five years. We're not going to retrench. Anyone will, even if we go on a loss"

A research participant in the Product-Growth and product management group had a different sentiment toward leadership:

"Leadership, in my honesty, leadership is a joke. It's a real people who the people who lead you are the people who show care for you, who talk to you and who have a sense of interest" (Research Interview 8, D8)

One of the research participants in the Operations-Stabilising Operations analysis group acknowledges the importance of balancing care for people with a focus on performance:

"And when you focus too much on the people, you know your performance suffers, your cost suffers, and all of those things happen. So you need that, that balance, and I don't think we've corrected it." (Research Interview 2, D2)

Summary

Research participants in the operations support analysis groups highlighted positive sentiments about observing the leaders of their organisations being people-centred in the face of a disruption that impacts their personal lives. They articulated their leaders' care, which motivated them to work through the disruption. Research participants also articulated that the organisation's affirmation and feedback from senior leaders created stability, given the uncertainty and chaos of COVID-19.

The sentiment was not only positive; a research participant in a product articulated that they observed care and different attributes from their leadership, which was outside their expectations. A research participant from the operational role analysis group articulated that balance is required between caring for people and not losing sight of performance, and their concerns were that the balance had never corrected events after the disruption was managed.

5.2.2.1.2 People-centred organisation

Evidence

Research participants identified the attribute of care to the organisation's identity and not just their observation of their leadership.

Research Interview 5 (D5) in Operations-Stabilising Operations analysis group states that: "XXX never touched my salary, if anything. They gave me an increase. They gave us bonuses, and they cared."

Research participants in the Product -Growth and product management analysis did not refer to care as an attribute but acknowledged their gratitude for job security:

“what that secure employment was. You are securely employed, but you are going to be all over the place all of the time. It's going to be in a very unstable manner that you securely employed, ” (Research Interview 8, D8).

Summary

Research participants in the operations analysis groups articulated that the organisation exhibited attributes of an organisation that cares for people in terms of the level of support as the COVID-19 outbreak escalated, affecting working environments and their personal lives. Research participants in the product role analysis group also articulated positive sentiment toward the organisation for protecting their livelihoods and mitigating the impact on their salaries even though they were still experiencing instability due to many change announcements.

5.2.2.1.3 Different perspectives on care

Evidence

The research participants in the Technology team-Technology build analysis group articulated care in the face of a difficult decision to let go of people:

“That was a tough decision, because, and it had to be done humanly. You know, how do you tell someone that, you know, we giving you a severance package and you had to be let go of that one and then, and how the organization reacted to be over and above what the benefits of the organizations would provide.” (Research Interview 10, D10).

Summary

One of the research participants in the technology roles analysis group articulated that the care was executed by giving difficult news that individuals would be getting retrenched due to the impacts of disruption. They acknowledged that the decision was difficult, but they observed that it was done humanely.

5.2.2.2 Communication

The research participants articulated the importance of how their organisation and leadership communicated during disruption and adaptation, warranting the analysis of communication as

a separate attribute. Table 14 is a summative view of the observed leadership or organisation communication attributes shared by all research participants in the analysis groups. The number of quotations coded determines the heat map in Table 15.

Table 15: Consolidated view of communication codes for all research participants

Communication	No.quotations		
o COM clarity and frequent communication of delivery expected			
o COM communication deferred to formal feedback versus team engagement			
o COM explaining the why of business goals			
o COM high levels of engagement with direct reports or team			
o COM leader is visible and communicates directly			
o COM making the organisations vision visible and accessible			
o COM simplifying the vision for direct reports to understand			
Number of quotations	High	Medium	Low

Source: The researcher's analysis

5.2.2.2.1 Leadership communication is inspiring

Evidence

Research participants articulated that the attribute of good communication created inspiration during the period of disruption and contributed to adaptation. This similarity in sentiment was in the Operations support team- Enabling operations, Operations-Stabilising Operations and the Technology team- Technology build analysis groups.

"It comes back to my original point of of helping people understand what their impact is, but understanding why there's a directive, why decision was made, because if somebody understands why the decision was made, then it helps the buy in process" (Research Interview 3, D3).

"Definitely positive. You feel more connected to your leader and more connected to the storyline that they're that the strategy that we as a business unit are following is definitely positive. " (Research Interview 11, D11)

"Definitely positive. You feel more connected to your leader and more connected to the storyline that they're that the strategy that we as a business unit are following is definitely positive. ." (Research 11, D11).

Summary

Excluding the product roles analysis groups, research participants from the rest of the analysis group articulated positive sentiments on their leader's communication. The first interesting point shared by participants is the importance of being engaged by their leaders; this created a connection with them. They also articulated that those leaders went beyond just giving them instructions about what they needed to do; they articulated the reason behind what they required from them and its link to a larger strategic objective. They also contextualised the disruption, which helped the research participants understand its impact and what they needed to do. This resulted in the research participants being motivated and inspired to take action to adapt to the disruption.

5.2.2.2.2 Leadership communication negative sentiment

Evidence

Research participants from the Product-Growth and product management analysis group did not make any statements on communication mobilising action but rather an expectation that was not met by leadership regarding communication:

“ something that you felt was true and was expressed in the working environment. And I think that was a thing that was completely missing. It was this claimed transparency that never actually came to fruition.” (Research Interview 8, D8).

Quotations from the Product- Growth and product management shared negative sentiment on how their leader communicated:

“could, he could. We always felt that okay, he's, he's part of this, yeah, the change happened because he left us, I see okay, and even now he says he's back, yeah, he's mostly in xxxxx. He's not really, he's not sat down and said, Okay, this is the strategy. This is what we're doing” (Research Interview 16, D16).

Summary

Research participants from the product roles analysis group shared negative sentiments on their leader's communication. The evidence from the interviews was presented in two ways. The first was that even though the leader was communicating, there were low levels of trust that the leader was authentic and that what they articulated would not occur. The second was

that the leader was not communicating and helping the research participants understand what was happening, what they needed to do, and how it tied to a broader strategy.

5.2.2.3 Leadership Qualities

Communication and care for people were attributes identified in the research participants' transcripts that define an organisation's characteristics and its followers' leaders. Table 16 is a summative view of the leadership qualities shared by all research participants in the analysis groups. The number of quotations coded determines the heat map in Table 16.

Table 16: Consolidated view of leadership qualities codes for all research participants

Leadership Qualities	Heat Map		
o LQ despite external focus leader still aware of responsibilities			
o LQ genuine relationship with people is good leadership			
o LQ importance of leadership being aware of what is happening in their department			
o LQ insights on leading people			
o LQ leader ,managing external pressures well.			
o LQ leadership should commit to disruption mitigations			
o LQ ownership and accountability as the organisation is a personal business			
o LQ reflection that leadership is reactive to disruption versus being proactive			
o LQ shift in leadership to be more human and connect versus following up on tasks			
o LQ The importance of leadership holding people accountable			
Number of quotations	High	Medium	Low

Source: The researcher's analysis

5.2.2.3.1 Insights on leadership

Evidence

As the research participants experience disruption and adoption, they make observations of leadership qualities that will help navigate disruption. Evidence of research participants expressing insights when observing their leaders was present in all four analysis groups:

“And that's, and that's, and that's where we as a team, at the time, developed the ethos of, it's not what you say, it's how you say it. You know, you can still, you can still make someone help someone understand what they've done is wrong, but you can say it in a way that's distractive and potentially push them over the edge and get even worse performance out of them. . (Research Interview 3, D3).

“what I experienced is that a manager, a manager's personality, maybe, would have to be slightly different to a leader's personality, and also, based on the follower that you're dealing with, you want to be able to approach them in a personality that works,” (Research Interview 13, D13).

“Yes, it doesn't mean that the human leader doesn't become hard on on delivery. It doesn't mean that they don't become hard on high expectations and demanding.” (Research Interview 10, D10)

Summary

Research participants from all analysis groups shared lessons on leadership during the period of disruption and adaptation. They articulated addressing behaviour that needed to be corrected and the importance of having this conversation with individuals you lead in a way that does not create further conflict; how the message is delivered was expressed as essential to limit further poor behaviour or disengagement. They articulated learning that a leadership approach can get a message on improving performance without alienating the individual due to aggressive delivery.

5.2.2.3.2 Being a humane leader

Evidence

The leadership attribute of connecting with followers at a human level and not just being a taskmaster that is transactional was articulated by research participants in all the analysis groups:

“I consciously decided already treat people with a with a level of respect that you would want to be treated with, right? And, yeah, that was Yeah. .” (Research Interview 9, D9).

“So, so there's a much more deliberate action of of engaging with people and greeting, and not necessarily even talking business, just connecting on a personal level and saying, Hey, how's it going, you know, how's everything, how's the family and so on.” (Research Interview 3, D3).

Research participants in the analysis group Product-Growth and product management acknowledged the importance of being a humane leader. However, they articulated it as a criticism of leadership:

“But what I have criticism around is the impact of leaders. Is that people are actually if, if you do not have a relationship with someone you are working with. You are not leading that person. And the quality of that relationship is around you, seeing what they do and guiding them. ” (Research Interview 8, D8).

Summary

Research participants articulated that leaders can still demand quality performance; however, it can be done humanely; leaders don't just have to rely on transactional behaviour to get performance from their teams. One of the research participants articulated the value of engagement and acknowledging people; this goes beyond not being transactional in requests; it also involves connecting with individuals you manage and being aware of their circumstances. A research participant from the product role group articulated their experience of the absence of their leaders being humane, which is an unmet expectation of leadership.

5.2.2.4 Analysis of Research Groups

Table 17: Theme two research analysis groups similarity mapping

	Operations support team-Enabling operations	Operations-Stabilising Operations	Product- Growth and product management	Technology team- Technology build
Operations support team-Enabling operations		Care for people Communication Leadership Qualities	Leadership Qualities	Communication Leadership Qualities
Operations-Stabilising Operations	Care for people Communication Leadership Qualities		Leadership Qualities	Communication Leadership Qualities
Product- Growth and product management	Leadership Qualities	Leadership Qualities		Leadership Qualities
Technology team- Technology build	Communication Leadership Qualities	Communication Leadership Qualities	Leadership Qualities	

Source: The researcher's analysis

Research participants in the Operations-Stabilising Operations and Operations support team-Enabling operations expressed similar positive sentiments to their leaders exhibiting attribute of being people centred during the COVID-19 disruption they also shared similarities in positive sentiments towards their organisations also exhibiting the same

attributes. In addition to the positive, a research participant in the Operations-Stabilising Operations analysis group also shared the importance of care being balanced with a focus on performance. What is interesting is that research participants in the Technology team-Technology build acknowledged the attribute of caring for people in leaders in the context of informing people they will no longer have jobs, and research participants in the Product-Growth and product management analysis group mentioned a shortcoming in care from their leaders.

In all four research analysis groups, participants expressed executing communication skills as a leadership attribute that inspired them during disruption and helped mobilise them to adapt; however, with the Product-Growth and product management analysis group, this came across as something that participants acknowledged was important but was an expectation not met by their leaders.

Research participants in all four analysis groups articulated that they gained insights into leadership from observing their leaders during disruption and moving towards adaptation. Being a humane leader and not just being transactional and focusing on tasks was a sentiment shared by research participants in all four analysis groups.

5.2.2.5 Theme summary

Research participants who experienced the disruption of COVID-19 and its impact on their business environment and personal lives expressed that they held in high sentiment leadership and organisational attributes of demonstrating care for employees. They also expressed the importance of their leaders being able to connect and communicate with them on a human level and striking a balance between focusing on tasks and their well-being. They also indicated they gained insights on leading people well during disruption from observing their leaders.

5.2.3 Theme Three: Group and Leadership Dynamics

Research participants experienced interpersonal dynamics between their teams and leaders during disruption and adaptation. Their experiences have been categorised into team, adverse, and positive leader-follower dynamics.

5.2.3.1 Team Dynamics

Research participants shared a range of team dynamic experiences during disruption and adaptation. Table 18 is a summative view of the team dynamic experiences shared by research participants in all the analysis groups. The heat map in Table 18 is determined by the number of quotations coded.

Table 18: Consolidated view of Team Dynamics codes for all research participants

Team Dynamics	Heat Map		
o TD challenges with leader result in multiple team resignations			High
o TD constant change resulting in team politics	Medium		
o TD continuous changes results in all team members leaving			High
o TD Decision making structure driven by shareholder and not policy			High
o TD disruption resulted in silos and disconnection		Medium	
o TD Disruption results in sudden change in leadership with promise of improved performance			High
o TD disruptive team members removed from the team			High
o TD effort in implementing practices to bring the team together			High
o TD Good team dynamics between team members		Medium	
o TD internal team dysfunction affecting ability to deliver		Medium	
o TD leadership priority of gain becomes the main focus of the team			High
o TD linked by common anxieties caused by disruption			High
o TD managing teams disagreement and pushback on next steps to manage disruption			High
o TD multi skills are required to achieve objectives			High
o TD multiple changes of managers resulted in loss of trust in the team			High
o TD new teams resulting in loss of positive working relationships			High
o TD team collaborates to solve challenges caused by disruption		Medium	
o TD team conflict on execution			High
o TD team focused on other activities outside of daily work			High
o TD team more aligned on what is required to achieve outcomes		Medium	
o TD team supports each other to survive leadership challenges			High
o TD unity around disengagement from work during disruption			High
Number of quotations	High	Medium	Low
	Medium	Medium	High

Source: The researcher's analysis

5.2.3.1.1 Collaborating to adapt and address disruption

Evidence

Research participants in all four analysis groups articulate an experience of the team coming together and collaborating to adapt and address disruption.

“within the team, it actually, within the business unit, it actually brought us closer, because we had think and and think, you know, in a in a systematic way, and that whatever that we do will impact all of us positively, .” (Research Participant 12, D12).

“It was the team is phoning one another. What can I help with? So I reflect back on that period for me, it is, it is the resilience of people and how in crisis we can come together. We can come together” (Research Interview 6, D6).

“This is a time where we have to take responsibility. We have to get through this. Everyone has to pull together, because that was also a message at the time, yeah, have to pull together to get through this.” (Research Interview 11, D11).

An additional team dynamic that was shared across all analysis groups was a reflection on how the team became more aligned on what they needed to do as disruption played out and they started to adapt:

“I think there's definitely more alignment there now and as a leadership team, we are more aligned in terms of what we need to achieve. So it feels like we're working more together, versus, like unintentionally, sometimes against each other. .” (Research Interview 1, D1).

“So it's like, this is where we're going guys, and this is what, this is what we're putting in the end. And that's quite important, or else, then you create very divided teams, and you don't want that.” (Research Interview 10, D10).

Summary

All four analysis groups had research participants who articulated that teams were developing better alignment and collaboration in adapting to disruption. Research participants articulated a heightened level of care as individuals extended support offers. Some research participants shared that they developed alliances, given the importance of adaptive initiatives and the level of collaboration required to solve them. Research participants also expressed improved levels of alignment, and they particularly noted the danger of a team that pulls in different directions and its inability to achieve what is required to manage disruption.

5.2.3.1.2 Pressure resulting in team member exits

Evidence

The Operations support team -Enabling operations and the Product-Growth and product management had similar adverse team dynamics. Disruption-induced leadership changes, high pressure and workload resulted in multiple team members leaving.

Research Interview 9 (D9) said:

“That turnover was ridiculous. When I say we weren't coping more, when I say the team wasn't coping and saying, I'm giving you that contest. Yeah, people would come, not cope and leave. .”

Research Interview 8 (D8) expressed that :

“There was not a single Yeah, yeah. Everybody left. And so I think that is something that speaks to that,”

Summary

The operations support and product roles analysis groups had research participants who articulated that disruption resulted in leadership changes and high-pressure workloads that resulted in team members resigning. One research participant articulated that they were the only individuals to remain, and the team consisted of individuals who had replaced the original team. Those new members only stayed for a short time as they could not cope with the high level of work pressure.

5.2.3.2 Adverse leader-follower dynamics

Research participants shared that they had unpleasant interpersonal dynamics with their leaders. Table 19 is a summative view of the adverse leader-follower dynamics experiences shared by research participants in all the analysis groups. The number of quotations coded determines the heat map in Table 18.

Table 19: Consolidated view of Adverse leader-follower dynamics codes for all research participants

Adverse leader-follower dynamics	Heat Map		
o ALF leadership maturity not sensitive to follower feelings			
o ALF does leadership have visibility of my performance			
o ALF dsirruption resulted in loss of connection between leadership and followers			
o ALF feedback and criticism to leaders countered with reminding of secure employment			
o ALF Follower tasks cannot be completed due to fear of getting clarity from leader			
o ALF follower wants autonomy to make more decisions			
o ALF groups form out of dissatisfaction with leader resulting in side leadership structures			
o ALF Is broader leadership aware or going to take action against poor leadership			
o ALF leader and follower clash and do not get along			
o ALF Leader becomes transactional in engagements with the team			
o ALF leader is critical and this creates anxiety in followers			
o ALF leader makes promises to drive performance but they are not delivered			
o ALF leader not being practical in execution			
o ALF leader not supporting direct reports even in forums			
o ALF leader passing on pressure to direct reports			
o ALF leader unavailable and commitment given by followers only based on power dynamics			
o ALF leaders taking on roles of followers to manage disruption			
o ALF leadership avoiding repsonsibility of managing disruption			
o ALF leadership behaviour is abusive			
o ALF leadership claiming transparency not materialising in action			
o ALF leadership direction for what is required is not clear			
o ALF leadership priority based on intent and where they expect to gain the most value			
o ALF leadership words are not matched by thier actions			
o ALF level of commitment low due to the low skill levels of employee			
o ALF Organisational leader technically brilliant however people management was not a strength			
o ALF rebellion alignment against leader due to dissatisfied team			
o ALF team struggles with leader when they shift from being transactional			
o ALF widening gap in the relationship with leadership due to the disruption			
Number of quotations	High	Medium	Low

Source: The researcher's analysis

5.2.3.2.1 Widening relationship with leaders

Evidence

Three of the analysis groups a) Operations-Stabilising Operations b) Product-Growth and product management c) Technology team-Technology build expressed a widening relationship with their leaders during disruption.

“there was lots of meetings, there was lots of all of those things, but I don't feel like the relationship. I feel like maybe we got a little bit further apart, almost. ” (Research Interview 2, D2).

“have a have a good life. And you're like that. Then you can, you could see that the coldness was starting to almost like the division, almost human division, was starting to occur.” (Research interview 10, D10).

Summary

Research participants in the operations role analysis group articulated that despite the higher frequency of meetings, there wasn't sufficient opportunity to maintain a relationship with their leader. During the disruption, historical ceremonies changed due to proximity limitations. When one of the research participants was transferring teams, parting ways with their leader was articulated as feeling cold and distant.

5.2.3.2.2 Loss of autonomy

Evidence

Research participants in Operations-Stabilising Operations and Product-Growth and product management analysis groups stated the importance of leaders granting their followers autonomy to make decisions during periods of disruption and adaptations:

“Give them respect. And also, what's that word, autonomy, like, allow them to operate, .” (Research Interview 9, D9).

Research Interview 8 (D8) expressed the importance of having autonomy as an observation of it being taken away by their leader as they went to directly to their team during the crisis and skipped them when orchestrating tasks:

“because now, actually, leaders were speaking to everybody directly, all of the time, in any way they wanted to, and we were skipping each other and and out of crisis, right?”

Summary

Research participants articulated that they applied an approach of giving individuals in their team autonomy to solve problems. This was incredibly challenging given the pressure created during disruption, and they got to that point by doing it incorrectly initially and trying to micro-

manage their teams. There was also an event shared about a research participant's leader bypassing them due to pressure to deliver and work directly with their direct reports, which created tension between them and their leader.

5.2.3.2.3 Friction with their leader

Evidence

Something interesting to note is that within the Operations- Stabilising Operations analysis group several participants expressed not getting along with their leader:

“And so I think when things were challenging between myself, my manager and their manager, it wasn't so it was just pressure, and it was just do this, and not that I couldn't trust my manager, but that that layer that we had didn't exist because the situation was reactive, and so the can would just get passed down along until something came about. So I think that was the most challenging thing. And a lot of times it felt like it was a disconnection between the head and the body, or, or, shall we say, the heart and the body.” (Research Interview 8, D8).

“but the team overall wasn't happy with some of the roles and responsibilities from certain said members, new members of the team, and then now the higher management was being questioned, you know, in terms of transparency and all those things” (Research interview 13, D13).

“I know that there's friction, and we are not okay, but we are here to deliver this thing, and that's it. So it became about that. It was just work. What do you need? This is what I'm going to deliver, and that's it.” (Research Interview 14, D14).

Summary

Some research participants articulated that they did not have a good relationship with their leader. Some of the tension that developed resulted from the leader bringing in new team members, and the selection process needed more transparency. Some of the evidence was an articulation of intense disagreement articulated by research participants in the product role analysis group; however, based on the narrative they shared, this was the result of a relationship that was already troubled before the disruption occurred; it resulted in challenges delivering initiatives to manage disruption

5.2.3.3 Positive leader-follower dynamics

Research participants shared that they went through positive interpersonal dynamics with their leaders. Table 20 is a summative view of the positive leader-follower dynamics experiences shared by research participants in all the analysis groups. The heat map in Table 20 is determined by the number of quotations coded by a code.

Table 20: Consolidated view of Positive leader-follower dynamics codes for all research participants

Positive leader-follower dynamics	Heat Map		
o PLF a new perspective on the decisions of leadership	High	Medium	Low
o PLF change in perception from leader on what can be delivered by follower	High	Medium	Low
o PLF follower expresses a view that expectation that leaders know what to do during disruption should be lowered	High	Medium	Low
o PLF follower expresses accepting that leaders are also human	High	Medium	Low
o PLF Follower expresses surprise at the level of commitment from the team to solve the disruption	High	Medium	Low
o PLF follower expresses view of the great responsibility of leaders due to their impact	High	Medium	Low
o PLF follower prefers to work closely with leader to ensure alignment on their decisions	High	Medium	Low
o PLF follower shift from expecting answers from leadership to offering solutions	High	Medium	Low
o PLF good working relationship with leadership	High	Medium	Low
o PLF leader made decisions that helped followers professional growth	High	Medium	Low
o PLF leader matured post disruption and it was easier to connect with them	High	Medium	Low
o PLF leadership led by example and provided inspiration and learnings to manage disruption	High	Medium	Low
o PLF leadership relationship lifts to a more strategic level	High	Medium	Low
o PLF personal relationship with leader motivated resilience through disruption	High	Medium	Low
o PLF relationship with leadership improved on a personal level	High	Medium	Low
Number of quotations	High	Medium	Low

Source: The researcher's analysis

5.2.3.3.1 Gaining new perspective

Evidence

Research participants in analysis groups Operations support team-Enabling operations and Operations -Stabilising Operations stated that they gained new perspectives on the decisions their leaders made during disruption and adaptation:

“but suddenly you find yourself also being a bit more soft on your Hard perception about a person, because you also realize that, you know, they are also just struggling.” (Research Interview 4, D4).

“And all of a sudden I could understand. I could look back and I could reflect. And I remember going back to xxxx and apologizing, you know, and I apologized to and I and, you

know, I think for like, six months, I will continuously tell her, I now get it.,” (Research interview 5, D5).

Summary

Research participants in operations and operations roles analysis groups shared that they gained a new perspective of their leaders. Before the disruption, they had a less-than-favourable view of their leader, which changed for them during the disruption and adaptation. Some of the reasons for the changing perspective were empathy, that they were also managing a new challenge as best they could, and that one of the research participants had to fulfil broader leadership tasks that made them gain a new perspective on the level of responsibility of their leader. This increased their respect for their leader, giving them a new understanding of what they have managed in their role.

5.2.3.3.2 Reaffirming the importance of leadership

Evidence

Research participants in analysis groups Operations support team-Enabling operations and Product- Growth and product management expressed that disruption showed the importance of leadership due to their impact.

Research Interview 4 (D4) said:

“ So when you're a leader, you're getting a huge responsibility. It's not about you, it's also about the other people, because their destiny is tied with your destiny, you know, as a leader.”

Research Interview 8 (D8) reflected that:

“That's a message to leaders. You make the job doable. Anybody can do a job. But actually, when you lead people that is someone's life, and just be a little bit cognizant, or at least, like tender around that point that this is someone's life ”

Summary

Research participants reflected on the importance of leadership when articulating what they went through during disruption and adaptation. They acknowledged that leadership has a role

to play in managing the impact of disruption and that its level of responsibility is large, given the outcomes it can influence regarding the people it is responsible for leading.

5.2.2.4 Leadership inspiration

Evidence

Research participants in analysis groups Operations support team-Enabling operations and Technology team-Technology build shared how they were inspired by their leaders on how to manage disruption:

“That ability, I think, is something that I, that I that I really appreciated. And I said to her in feedback, is that, you know what is, is I've grown as a leader because of you didn't coach me, but I was coached through what I experienced. ” (Research Interview 6, D6).

“ So I mean, that's just hats off and kudos to all the leadership we had at that time. And yeah, even xxxxx and our business unit, they were also giving us that such encouragement and leadership,” (Research Interview 11, D11).

Summary

One of the research participants mentioned leadership's ability to lift up research participants to see the bigger picture and not remain in operational details as inspirational leadership action they observed from their leader. One of the research participants in the technology analysis groups articulated that they were inspired by their management of the disruption and reassured them and everyone else in their department that they would overcome disruption challenges.

5.2.3.4 Analysis of Research Groups

Table 21: *Theme three research analysis groups similarity mapping*

	Operations support team- Enabling operations	Operations-Stabilising Operations	Product- Growth and product management	Technology team- Technology build
Operations support team- Enabling operations		Team Dynamics Positive leader-follower dynamics	Team Dynamics Positive leader-follower dynamics	Team Dynamics
Operations-Stabilising Operations	Team Dynamics Positive leader-follower dynamics		Team Dynamics Adverse leader-follower dynamics	Team Dynamics Adverse leader-follower dynamics Positive leader-follower dynamics
Product- Growth and product management	Team Dynamics Positive leader-follower dynamics	Team Dynamics Adverse leader-follower dynamics		Team Dynamics Adverse leader-follower dynamics
Technology team- Technology build	Team Dynamics	Team Dynamics Adverse leader-follower dynamics Positive leader-follower dynamics	Team Dynamics Adverse leader-follower dynamics	

Source: The researcher's analysis

Research participants in all four analysis groups articulated an experience of the team coming together and collaborating to adapt and address disruption. Amongst the analysis groups, the Operations support team- Enabling operations and Product-Growth and product management groups experienced adverse team dynamics as team members left the team due to the pressures of disruption.

All research participants experienced adverse leader-follower dynamics; participants in the Operations-Stabilising Operations analysis group experienced clashes with their leaders that affected the relationship. Operations-Stabilising Operations and Product-Growth and product management groups commented on their leaders not giving them autonomy during disruption and even directing their teams' tasks. a) Operations-Stabilising Operations b) Product-Growth and product management groups c) Technology team-Technology build expressed that their relationship with their leaders grew more distant during disruption.

The research participants went through realisations about their leaders during the disruption period. For participants in the Operations support team- Enabling operations and Product-Growth and product management groups, this was shared as getting a better understanding of leadership responsibility due to its impact. Operations-Stabilising Operations and Operations support team- Enabling operations group gained new perspectives on their leader's decisions as they better understood their outcomes while Operations-Stabilising Operations and Technology team-Technology build groups reflected on how their leaders inspired them to manage disruption based on how they observed them do it.

5.2.3.5 Theme summary

Disruption can result in workload pressures and team behaviours, and this results in participants' team members no longer being able to stay in the team. However, under the same set of circumstances, some of the team participants managed to collaborate and take steps to adapt to disruption. Participants had various experiences with their leaders; some drew inspiration from managing disruption, while others experienced a loss of autonomy as their leader's managed disruption. Participants also experienced new perspectives on their leaders' decisions and changed their previous negative perceptions. At the same time, some gained a better understanding of leaders' responsibility due to their impact on adapting to disruption.

5.2.4 Theme Four: Role Perceptions

The categories in this theme are the research participants' reflections on the perceptions of their role during periods of disruption and adaptation in complex adaptive systems.

5.2.4.1 Follower ambition

Research participants shared that they had ambitions within their roles during disruption and adaptation. Table 22 is a summative view of the personal growth experienced by research participants in the analysis groups. The number of quotations coded determines the heat map in Table 22.

Table 22: Consolidated view of follower ambition codes for all research participants

Follower ambition	Heat Map		
o FA approach to work is beyond limits of role and expands to other considerations			
o FA arrogance about understanding the business			
o FA dissatisfaction with current role			
o FA make precense felt and become visible in discussions			
o FA personal ambition to progress professional career			
Number of quotations	High	Medium	Low

Source: The researcher's analysis

5.2.4.1.1 Follower career ambitions *Evidence*

Research participants from the four analysis groups a) Operations support team-Enabling operations b) Operations-Stabilising Operations c) Product- Growth and product management d) Technology team- Technology articulated their career ambitions:

"I think the other thing xxxxx is I was very much driven and wanted to grow in my career. And the one thing covid did was that freeze, you know, there was that freeze on roles, and all of a sudden I was stuck, you know, all of a sudden, the opportunities were less. ." (Research Interview 5, D5).

"And I realized even if I wanted to stay within the business unit, I wouldn't go and be promoted to the next level because of his influence at exco level. " (Research Interview 14, D14).

Summary

Research participants said they had career ambitions, which had some influence on their commitment to driving adaptation post-disruption. One participant articulated that the COVID-19 disruption limited their career opportunities and even resulted in friction with their leaders; they suspected they were deliberately trying to limit their career aspirations. A research participant who mentioned adverse leadership dynamics also articulated that they left their department because they doubted their leader would support their ambitions to be promoted to a more senior role.

5.2.4.1.2 Dissatisfied with their roles

Evidence

Research participants from the analysis groups Operations support team-Enabling operations Product- Growth and product management shared that they were unhappy in their roles:

"I just left and I said, You know what? Anything? I just want to leave. I want to just start a break somewhere else, you know. So it was largely better. I wouldn't blame ja, look, covid made it worse, but it was largely based on, I think, a lack of maturity on my end, more than anything. Alright," (Research Interview 5, D5).

Summary

A research participant in the operations role analysis group said they no longer enjoyed their role. They do not attribute their feelings towards their role to the disruption. They were also candid about lacking maturity during that period.

5.2.4.2 Role expansion

Research participants shared that their roles expanded during disruption and adaptation. Table 23 is a summative view of articulating the role expansion experienced by research participants in the analysis groups. The number of quotations coded determines the heat map in Table 23.

Table 23: Consolidated view of follower ambition codes for all research participants

Role expansion	Heat Map		
o RE caution about helping other departments in case support is not successful			High
o RE connecting with the bigger picture and seeing the importance of role in the organisation	Medium		
o RE disruption increase the importance and support of the role		Medium	
o RE disruption resulted in follower getting leadership exposure			High
o RE disruption resulted in access to leadership and first hand account of strategy			High
o RE perception of importance of role increased during resolving disruption	Medium		
o RE disruption resulted in role expanding to cover leadership responsibilities		Medium	
o RE follower responsibility increases and complexity and presents opportunities			High
o RE role activities decreased during disruption			High
o RE role expands to take on additional activities to manage disruption	Medium		
Number of quotations	High	Medium	Low
	Medium	Medium	High

Source: The researcher's analysis

5.2.4.2.1 Acknowledging the importance of their role

Evidence

Research participants from the four analysis groups a) Operations support team-Enabling operations b) Operations-Stabilising Operations c) Product- Growth and product management d) Technology team- Technology connected to a bigger picture and seeing the importance of their role in the organisation:

“how I show up? I think yes. And the reason I'm saying yes is post covid with the expansion of my role, it's almost like it opened up a different lens into the business. So all of a sudden, I saw the business goals clearer than what I did before, like I said, when my role expanded across business units, I was a part of something bigger” (Research Interview 1, D1).

“So I think, I think my role was elevated, you know, as a key role in making sure that we drive people to a specific goal. So, ja, I think so. I think my role was, and again, from the front line.” (Research Interview 7, D7).

“There was a feeling like, you know, we were making change. We were impacting. Everything we were doing was really big, because we were tackling initiatives that was very topical, yeah? So, yeah, it was a time of making impact, and” (Research Interview 11, D11).

Summary

Research participants in all four analysis groups articulated that they experienced a change in perspective of the impact of their roles during the adaptive process. Disruption introduced ways of working with additional departments, expanding their firsthand experience of their impact on the business. They shared that disruption created focus on their department and contributed to their understanding of the importance of their role in the organisation. Research participants articulated that the adaptive process also introduced new collaboration partners, and their experience contributed to learning about the potential impact their role can also make on the organisation; they realised they could contribute to more initiatives than before the disruption.

5.2.4.2.2 Taking on additional activities in the adaptive process

Evidence

Research participants from the analysis groups a) Operations support team-Enabling operations b) Operations-Stabilising Operations c) Product- Growth and product management stated that their roles expanded to include additional activities to manage disruption:

“I think we were forced to with the technology change that covid brought along. It meant, like, I like I said previously that our jobs expanded into other business units and stuff, so all of a sudden we were working with different people than we were working with before, and now you almost had this” (Research Interview 1, D1).

“I think, yeah, I think I had to be a lot more hands on, yeah, I remember, I remember almost taking on the role of an IT technician. ” (Research Interview 5, D5).

“So so team dynamics is one of them, but I think some of the other people could maybe have different triggers that also lead to impacts on their work. So yeah, I found myself having to tap into that a little bit into being a leader, both a leader and a manager.” (Research Interview 13, D13).

Summary

Research participants from the operations, operational support and product role analysis groups articulated role expansion. The first form of expansion shared was to interact with new stakeholders and a more comprehensive network during the adaptive process, as technology requirements had to change given new customer and operational requirements. The second form of expansion articulated was that the research participants took on more responsibilities in the adaptive process. They had to expand their knowledge beyond operations and understand information-related challenges. The third form of expansion shared by one of the research participants was that their role expanded into leadership responsibilities as they had to solve for coordination challenges during the adaptive process.

5.2.4.3 Analysis of Research Groups

Table 24: Theme four research analysis groups similarity mapping

	Operations support team- Enabling operations	Operations-Stabilising Operations	Product- Growth and product management	Technology team- Technology build
Operations support team- Enabling operations		Role expansion Follower ambition	Role expansion Follower ambition	Role expansion Follower ambition
Operations-Stabilising Operations	Role expansion Follower ambition		Role expansion Follower ambition	Role expansion Follower ambition
Product- Growth and product management	Role expansion Follower ambition	Role expansion Follower ambition		Role expansion Follower ambition
Technology team- Technology build	Role expansion Follower ambition	Role expansion Follower ambition	Role expansion Follower ambition	

Source: The researcher's analysis

Research participants in all four analysis groups articulated an experience of disruption and adaptation that resulted in them seeing the wider contribution their roles can make to the organisation. Research participants in operational and product analysis groups also articulated taking on additional activities to manage disruption, including leadership responsibilities. They also gained a new perception of the importance of their role in resolving the disruption.

All research analysis groups had participants who shared a personal ambition to grow their careers and articulated that they deliberately took steps to make their presence more felt in forums; evidence could only be identified for research participants in operational and product role analysis groups. However, some operational support and product role analysis participants expressed dissatisfaction with their roles.

5.2.4.4 Theme summary

The analysis of the research groups revealed several key insights. Participants from the operations support, operations, and technology teams reported a significant shift in their perception of their roles. They recognised the critical importance of their contributions. This realisation was often accompanied by a newfound sense of responsibility and acknowledging their impact on the organisation and its customers.

Participants described taking on additional roles and responsibilities to navigate the disruptions, highlighting their leadership and adaptability. Research participants expressed ambition for their careers and sought to enhance their visibility and influence.

However, the findings also indicated dissatisfaction among participants in operational support and product roles.

5.2.5 Theme Five: Follower Personal Experience

The categories in this theme are the research participants articulating their personal experiences of disruption and transitioning to adaptation within complex adaptive systems.

5.2.5.1 Personal impacts of disruption

Research participants shared the personal impacts they experienced during the disruption. Table 25 is a summative view of the personal impacts experienced by research participants in all the analysis groups. The number of quotations coded determines the heat map in Table 25.

Table 25: Consolidated view of positive impacts of disruption codes for all research participants

Personal impacts of disruption	Heat Map		
□ PID being stuck in transition to a new way of doing things			
□ PID clarifying follower operational responsibilities prior to disruption and it primarily involved stakeholder management			
□ PID disruption resulted in doing new activities and this also introduced discomfort			
□ PID disruption resulted in increased follower commitment to help customers			
□ PID disruption resulted in isolation during completing tasks			
□ PID disruption also resulting into an impact on personal lives			
□ PID due to personal circumstances work participation was limited during disruption			
□ PID impact of disruption resulted in focus and removal of distractions			
□ PID pretending to be present meanwhile you are disengaged and not committed			
□ PID transition during disruption limit ability to integrate to new environment			
Number of quotations	High	Medium	Low

Source: The researcher's analysis

5.2.5.1.1 Impact on personal lives

Evidence

Research participants from the four analysis groups a) Operations support team-Enabling operations b) Operations-Stabilising Operations c) Product- Growth and product management d) Technology team- Technology articulated that disruption had an impact on personal lives:

“So it was a new norm, and it was at this fear that, you know covid, when, when you heard someone had covid, you just do death like that was the first thing that came to mind. So you had this fear that if ever you got it, you didn't want to be the cause of someone else getting it. So I think that was just also also happening at the same time.” (Research Interview 1, D1).

“My leaders, kids couldn't go to school. My advisors, kids couldn't go to school. So there was just new dynamics altogether around the stuff that we had to deal with..” (Research Interview 5, D5).

“just that your home environment as well was not conducive to actually do well for me, because of the the child and space wise, we know it wasn't set up to to be a home office, right? So we battled with that..” (Research Interview 14, D14).

Summary

Research participants in all four analysis groups articulated that COVID-19 disruption impacted their personal lives. Research participants shared that the disruption dramatically

affected home life routines, including the integration of the work environment into the home environment. A joint articulation was the health anxiety given the spread of COVID-19 and concern for family members who were infected.

5.2.5.1.2 *Commitment to help customers*

Evidence

Research participants in the analysis groups a) Operations support team-Enabling operations b) Operations-Stabilising Operations c)Product- Growth and product management articulate how they committed to helping customers during disruption:

“People are not buying new, new products, but we continue servicing them, because people are going to we're going into debt.” (Research Interview 12, D12).

“because I managed to help customers understand that we hadn't become a faceless bank. We were still people, and we were still interested in what they had to say ” (Research Interview 3, D3).

“there was friction in that we didn't really know what the customer needed, and solution wise, yes, we figured this is what we should do, but we later found out we forgot about USSD customers who don't necessarily are app enabled, .” (Research Interview 14, D14).

Summary

Research participants articulated a commitment to help customers as they observed the impact disruption would have on them. Research participants in product role analysis groups articulated their commitment to ensuring new product offerings are available for customers as they struggled due to the impact on their livelihoods. The research participants in the operations role analysis group articulated how they committed to customer service to reassure customers that they still have support from a service provider.

5.2.5.2 *Emotive impacts*

Research participants shared the emotive impacts experienced during disruption and adaptation. Table 26 is a summative view of the emotive impacts experienced by research participants in the analysis groups. The number of quotations coded determines the heat map in Table 26.

Table 26: Consolidated view of Emotive Impacts codes for all research participants

Emotive impacts	Heat Map		
o EI anxiety created by disruption regarding job security			
o EI complexity and disruption is unpleasant			
o EI coping with the impacts of being micromanaged			
o EI disengagement during disruption			
o EI Disruption causes anxiety and seems overwhelming			
o EI disruption introduced disempowering decision-making processes that caused follower frustration			
o EI experiencing stress and pressure to deliver			
o EI follower despondent due to leadership challenges not being addressed			
o EI follower expresses emotional stress from leadership			
o EI frustration that leadership is attempting to replace existing followers			
o EI growth in responsibilities is overwhelming			
o EI in a time of constant change followers' emotions are sensitive			
o EI leadership responsibility is expressed as challenging			
o EI livelihood safe however discomfort with reliance on leader to stay employed			
o EI sense of insecurity even in the face of confirmation of security of livelihood			
Number of quotations	High	Medium	Low

Source: The researcher's analysis

5.2.5.2.1 Disruption and adaptation is challenging

Evidence

Research participants from the four analysis groups a) Operations support team-Enabling operations b) Operations-Stabilising Operations c) Product- Growth and product management d) Technology team- Technology shared that the emotive experience of the responsibility of leadership during disruption and adaption is challenging:

“just above 2000 people at the time, and we had to do all consultations online, take people through the journey to say and explain the why, as well, negotiate with the union too. ” (Research Interview 12, D12).

“but looking after 150 let's call it 160 with the leaders having to look here monitor 160 people was was very tough at that time. And but then this is the one thing. And I, you know, whenever, when anyone tells me that they want to come into leadership” (Research Interview 5, D5).

Summary

Research participants articulated that managing disruption was challenging. Evidence from the operations and operations support analysis groups articulated that the sudden changes

introduced by disruption and the complexity of the number of frontline advisors that required a shift in their daily operating routine was challenging.

5.2.5.2.2 *Disruption is overwhelming*

Evidence

Research participants from the analysis groups Operations support team-Enabling operations, and Operations-Stabilising Operations shared the feeling of being overwhelmed by growth in responsibilities during disruption:

“From an xx perspective, my team was drained. I was drained as well. There was a time where, like, you work like, from eight in the morning until eight, 910, in the evening, because you and you have to attend to everything when people are calling you, like, ” (Research Interview 12, D12).

“And, yeah, the the reality of having to adjust and peak in my own self motivation, self talks, peak in my energy levels, you know, for all of those different events or different managers that came in. So, yeah, it became a bit a bit too much at the point. Yeah, a lot” (Research Interview 13, D13).

Summary

Research participants articulated that the volume of work and the increased pace of work introduced by disruption was overwhelming. Research participants acknowledged that they had managed their energy levels to ensure they were calm to the point of being ineffective.

5.2.5.2.3 *Disruption causes stress and pressure to deliver*

Evidence

Research participants from the analysis groups Operations support team-Enabling operations and Product- Growth and product management shared that they experienced stress and pressure to deliver during disruption:

“Bu if something broke now, you needed to, because you couldn't wait for tomorrow. So it took a lot of time and effort and energy. But not that it stretched me from a work perspective, because we are continuously, if you're working our environment, you're continuously stressed, stressed.” (Research Interview 12, D12).

Summary

An operations role analysis group research participant articulated high stress levels to manage disruption. The pace of the impacts of the changes and the pressure to implement adaptive changes created high levels of anxiety and stress. Research participants articulated that they had to find a way to manage.

5.2.5.3 Follower growth

Research participants shared the personal growth they experienced during disruption and adaptation. Table 27 is a summative view of the personal growth experienced by research participants in the analysis groups. The number of quotations coded determines the heat map in Table 27.

Table 27: Consolidated view of Follower Growth codes for all research participants

Follower growth	Heat Map		
o FG connecting with the bigger picture and seeing the importance of role in the organisation	Green		
o FG disruption created renewed energy and motivation to support solutions		Yellow	
o FG disruption resulted in reflection that follower is in the correct role			Red
o FG professional growth as a result of disruption	Green		
o FG dont allow connection with the group over dissatisfaction to override individual principles			Red
o FG expanding understanding beyond requirements of current role	Green		
o FG improvement of skills and effectiveness	Green		
o FG see role in new light and focus on its potential contribution		Yellow	
Number of quotations	High	Medium	Low
	Green	Yellow	Red

Source: The researcher's analysis

5.2.5.3.1 Improvement in skills and effectiveness

Evidence

Research participants from the analysis groups a) Operations support team-Enabling operations b) Operations-Stabilising Operations c) Product- Growth and product management articulated and improvement in their skills and effectiveness:

“And so that was, that was something that that changed for me, and that I had to work on to be able to cope with the with the bigger workload” (Research Interview 1, D1).

“ So, yeah, definitely, I think it just, it just made me learn more, understand more about the business, but it also made me learn more about people, you know, we, we in the people business, you know? ” (Research Interview 5, D5).

“I think I've adapted, and I've managed to be able to actually deliver and be home and not not be doing other things, you know what I mean, like work ethic, that that is that's definitely improved being at home, like output, being alone, being disciplined.” (Research Interview 14, D14)

Summary

Research participants from the operations, operations support and product roles analysis groups articulated an improvement in their skills. One of the skills articulated by the research participants was the ability to influence their stakeholders, as this was required during the adaptive process. Research participants also articulated improved effectiveness in managing large workloads and working virtually from their residence versus the office.

5.2.5.3.2 Expansion of understanding

Evidence

Research participants from the analysis groups Operations support team-Enabling operations and Product- Growth and product management shared that their understanding expanded beyond their role as they transitioned to adaptation:

“So that definitely changed. What's memorable to you about, so you telling me about how you, when you when you felt your role expand and your contribution expand.” (Research Interview 1, D1).

“So that was actually a part I enjoyed, because what it introduced was a research element to my work, and an openness and a sense of, oh, what's happening? What do other people in the world do around credit? ” (Research Interview 8, D8)

Summary

In the process of adaptation research, participants from the operations support and product roles analysis groups articulated that their understanding of the organisation improved. The research participants took on additional responsibilities, and in working with a broader network, their contribution increased, and in the process, they learnt more about how the organisation works.

5.2.5.4 Analysis of Research Groups

Table 28: Theme five research analysis groups similarity mapping

	Operations support team- Enabling operations	Operations-Stabilising Operations	Product- Growth and product management	Technology team- Technology build
Operations support team- Enabling operations		Personal impacts of disruption Emotive impacts	Personal impacts of disruption Emotive impacts	Personal impacts of disruption Emotive impacts
Operations-Stabilising Operations	Personal impacts of disruption Emotive impacts		Personal impacts of disruption Emotive impacts	Personal impacts of disruption Emotive impacts
Product- Growth and product management	Personal impacts of disruption Emotive impacts	Personal impacts of disruption Emotive impacts		Personal impacts of disruption Emotive impacts
Technology team- Technology build	Personal impacts of disruption Emotive impacts	Personal impacts of disruption Emotive impacts	Personal impacts of disruption Emotive impacts	

Source: The researcher's analysis

All four analysis groups shared that disruption impacted their personal lives. Research participants in the analysis groups: a) Operations support team-Enabling operations b) Operations-Stabilising Operations c) Product- Growth and product management expressed that during the period of disruption, they experienced increased commitment to customers given their customer support, interface and product creation roles. Research participants in operational roles expressed that they had to perform new activities that brought them discomfort. A research participant in a product role articulated how they became disengaged due to low levels of commitment.

Research participants in all four analysis groups shared that the responsibility of leadership was challenging during disruption. Research participants in the a) Operations support team-Enabling operations b) Operations-Stabilising Operations c) Product- Growth and product management analysis groups acknowledged that complexity and disruption are unpleasant, overwhelming and cause anxiety. The operations and product analysis groups articulated the stress and pressure to deliver. The operational analysis groups were unique in articulating that they felt overwhelmed as their responsibilities grew.

Research participants in the a) Operations support team-enabling operations, b) Operations-Stabilising Operations, and c) Product- Growth and product management analysis groups shared that they experienced an improvement in the skills and understanding of the business beyond their roles.

5.2.5.4 Theme summary

The findings covered the personal experience of the research participants. During the disruption, they increased their level of commitment to help and mitigate impacts on customers; due to the nature of the disruption, their personal lives were also affected, which was a disruption factor that managed to safeguard the business. Some research participants experienced lower levels of engagement, and they evidenced articulated relationship challenges with their leaders as drivers. Disruption introduced new activities, and this came with discomfort.

Based on the evidence from research participants, leading during disruption is a challenging responsibility. In general, levels of commitment were high among research participants. However, the findings indicate that the complexity and additional responsibilities introduced by disruption and adapting resulted in overwhelmed, stressed, and anxious emotions.

Interestingly, despite the stress and anxiety, the findings also indicated that research participants experienced an improvement in their skills and a growth in understanding of their business beyond their roles as they adapted to the disruption.

5.3 Summary of research findings

The research findings provide evidence of the multifaceted impacts of disruption on team dynamics and leadership relationships. Participants reported collaboration and conflict within teams, with some members adapting effectively while others struggled. Leadership dynamics emerged with certain participants feeling inspired by their leaders' responses to disruption, whereas others experienced diminished autonomy and adverse relationships. The disruption also facilitated new perspectives on leadership, with some participants gaining a more profound understanding of leadership responsibilities and altering their prior negative perceptions.

The themes cover the interplay between disruption, team dynamics, and leadership responses. Disruption can result in workload pressures and adverse team behaviours, leading some team members to depart while others successfully collaborate to adapt. The diverse experiences with leaders, ranging from inspiration to a loss of autonomy, highlight the pivotal

role of leadership in navigating periods of disruption. Furthermore, participants indicated that these experiences fostered new insights into their leaders' decisions and responsibilities, ultimately reshaping their views on leadership amidst challenging circumstances.

Findings also showed evidence of research participants recognising the critical importance of their contributions, including a newfound sense of responsibility and acknowledgement of their impact on the organisation and its customers.

There was evidence of research participants taking on additional roles and responsibilities to navigate the disruptions, highlighting their leadership and adaptability.

CHAPTER SIX: DISCUSSION

6.1 Introduction

The research findings, interpretations, and inferences are presented in this Chapter. The overarching aim of this chapter is to present research outcomes that will contribute additional insights to the CLT. The findings of this chapter are primarily derived by comparing the lived experience of the followers (Chapter Five) with the knowledge base demonstrated by literature (Chapter Two) in the context of a complex adaptive system during periods of disruption.

Findings and observations are derived per sub-research question (initially introduced in Chapter Three). Each question is furthermore considered based on the five emerging themes and 14 categories presented in Chapter Five,

Linking and associating the research sub-questions with corresponding themes answers the principal research question: **What are the lived experiences of followers within the context of a complex adaptive system during periods of disruption and adaption?**

Table 29 depicts the themes that are associated with, as well as the literature constructs that informed the respective research questions. The flow of this chapter follows the same sequence and logical structure specified in Table 29.

Table 29: *High-level overview of the discussion chapter*

Research Sub-Question	Themes	Literature constructs
One	Impacts of Disruption	Complex Adaptive System
		Complexity Theory
Two	Leadership and Organisational Attributes	Complexity Leadership Theory
Three	Group and Leadership Dynamics	Complexity Leadership Theory
		Role Based views
		Evolutionary views
Four	Role perception Follower Personal Experience	Evolutionary views
		Complexity Leadership Theory
		Constructionist approach

Note. The researcher's compilation of matched findings and themes to the research question and literature review.

6.2 Discussion of research sub-question one: Impacts of disruption

Research sub-question one aimed to explore the disruption and adaptation in a CAS from a follower's perspective. The research participants interviewed shared their account of disruption to their business environment, adaptation to disruption and the positive outcomes they observed. The findings have similarities to the emergence process articulated in CLT (Rosenhead et al., 2019). Table 30 is an overview of themes linked to the research sub-question.

Table 30: Overview of research sub-question and themes

Research sub-question	Themes	Sub-themes
What do followers observe in their work environment during periods of disruption and adaptation in a complex adaptive system?	Impacts of Disruption	Disruption business impact
		Disruption countermeasures
		Positive outcomes of disruption

Note. The researcher's compilation of research sub-questions and matching them and sub-themes.

6.2.1 Sub-theme: Disruption business impact

6.2.1.1 Research findings

Research participants in operations, operational support, product and technology teams articulated that when the national lockdown was announced to mitigate the rate of COVID-19 spreading, they experienced chaos in their day-to-day work environment. Not only could they no longer work as they used to, but the country was also experiencing infrastructure challenges that added additional obstacles to performing their daily duties. In summary, everything felt chaotic and sudden, disrupting previous working methods.

The same participants shared that they faced challenging operational impacts. Overnight, they had to enable many operational staff to work from home; working from home required a change in the asset's frontline use, and they had to rely on their access to internet connectivity. This exposed the business to the personal limitations of its employees. Support staff that could

no longer monitor individuals face-to-face and required technological solutions to fulfil the same tasks virtually.

Research participants across all the analysis groups articulated that when the disruption occurred, they increased the intensity of their daily workday to try and cope with the impacts it created. Some of them articulated that the motivation to work longer hours was based on a concern of not being visible in the new ways of working virtually, and they needed to demonstrate their relevance.

Some of the research participants articulated that they were conscious of the fact that they had to urgently work longer hours to solve the operational challenges created by disruption. Product teams had to launch a new product to prevent the business from severe income statement impacts; the product had never been made before and required a higher frequency of meetings, engaging a wider network of stakeholders and longer meetings to develop a new product within a time that historically took a longer time frame. This created heightened levels of intensity.

Research participants in the four analysis groups articulated a sudden change in working methods, particularly communication. Virtual communication replaced face-to-face communication, and participants articulated that they had to be deliberate and purposeful in communication because the benefit of being next to colleagues was no longer available. Communication platforms with larger groups created a fast pace and quantity of communication, and it was possible to miss important information. Adopting communication platforms after the disruption created better access between senior leadership and frontline staff.

6.2.1.2 Inputs from literature

Complexity theory states that one of the characteristics of a complex adaptive system is that it has the characteristics of a phenomenon called emergence (Cilliers, 2000). It's a process that involves ongoing creativity and addressing required to meet external demands placed on the system (Miller et al., 2022). The research setting is the financial services sector in SADC, and our criteria for selecting the research participants were individuals in follower roles in

different financial services organisations that experienced disruption and adaptation during the national lockdown period during the outbreak of COVID-19.

Their organisations provide the context of a complex adaptive system. Emergence consists of four stages; the stage in the literature associated with the impacts of disruption is the disequilibrium stage within emergence (Mendes et al., 2016). Before disequilibrium, the system is in disequilibrium and is stable; ways of working are routine and predictable (Uhl-Bien & Arena, 2018). Equilibrium is affected by destabilising elements that result in disruption (Plowman et al., 2007).

Destabilising elements are unstable conditions in the environment, or they could also be internal innovation (Plowman et al., 2007). As adaptive tensions increase, they push the entire system into a far-form equilibrium state, and in this state, the organisation is being affected by new energy and information disrupting existing routines and ways of working (Plowman et al., 2007).

In Plowman et al. (2007) study the mission church case study identified the disruption in patterns as destabilising forces driven by the leaders to highlight and create conflict and controversy (Plowman et al., 2007). Its impact pushed the organisation towards chaos and created instability. Members of the church had to cope with new changes that drove them away, and they could no longer recognise the church doing what they were used to doing (Plowman et al., 2007). This is the first phase of emergence; there should first be a disruption experienced throughout the entire system (Uhl-Bien & Arena, 2018).

6.2.1.3 Conclusion

Research findings from followers regarding disruption align with the academic literature on the first phase of emergence; the research participants acknowledge that they experienced a destabilising element from their environment in the form of a National Lockdown (Mendes et al., 2016). Research participants articulated that the disturbing patterns took their departments to the edge of chaos and out of equilibrium, and it was a sudden occurrence (Cilliers, 2000).

(Plowman et al., 2007) articulates that new energy and information enter the system during disequilibrium; research participants articulated this in terms of sudden new regulations and constraints to the work environment and customer product requirements that must be

resolved. Based on the findings, the insights from followers still align with what is articulated in academic literature.

6.2.2 Sub-theme: Disruption countermeasures

6.2.2.1 Research findings

Research participants in all the analysis groups articulated that they had to learn new ways of doing things to adapt to the disruption. There were also expressions from research participants that change was difficult, but they had to deliberately embrace a new way of working. One of the research participants from the operations support analysis shared an interesting articulation that they have no choice but to adapt; however, what is required is unknown, and they can't rely on the stability of old working methods. They acknowledge that they need a mindset to accept the discomfort of change without a clear roadmap of what they need to do.

Research participants articulated that they needed to focus on improving business performance. While adapting, some of the research participants expressed the motivation to correct the impact on business performance. More was needed for the participants to get through the disruption. They also had to work toward lifting business performance.

Research participants from operations and operations support analysis highlighted that there was an attempt to introduce innovation before the disruption. Still, the pace of adoption and implementation could have been faster. Post-disruption, the innovation of migrating the operating environment to become a hybrid of virtual and office-based happened very quickly compared to previous attempts when the environment was stable.

Research participants in the three analysis groups, which included operations, operations support, and technology roles, articulated that the role played by a leader helped their team manage the disruption. They also articulated that their leader played an essential role in creating the environment to find composure as a team to adapt to disruption. The buy-in from leadership that change was required helped, and their positivity motivated the research participants to adapt to the disruption.

Research participants in operation support and technology roles articulated that investing in new technology was essential to help with adapting to disruption. The nature of disruption

required technology implementation to work virtually and enable customers to get access to services.

6.2.2.2 Inputs from literature

The literature covers characteristics of complex adaptive systems based on complexity theory, including the role of leadership from complexity leadership theory. The characteristics of complex adaptive systems that cover disruption countermeasures are emergence, far-from-equilibrium adaptability and self-organisation (Miller et al., 2022). Uhl-Bien & Arena (2017) articulate that leadership has a role in scaling emerging ideas into the operational system.

Within emergence solutions can emerge from learning and creativity (Mccarthy et al., 2006). The creative space occurs at the edge of chaos and far from equilibrium (Morrison, 2010). Operational leadership has a formal role in accommodating change; for new ideas to be adopted at scale, they must overcome constraints and limitations as this creates resistance to adapting to the change; they take on a sponsoring role and champion the change in their operational environment (Uhl-Bien & Arena, 2017).

6.2.2.3 Conclusion

Evidence from the literature aligns with articulation from research participants that when the system is far from equilibrium and facing chaos, it is at its most creative (Mccarthy et al., 2006). The mention of new technology is essential to prevent chaos and restore stability in support roles, reflecting creativity and openness to try new solutions. Scaling a new solution requires support from operational leadership to adapt new solutions at scale (Uhl-Bien & Arena, 2017). Operation research participants highlight this importance.

An interesting insight and perspective shared by research participants and not explicitly identified in the literature is the inherent motivation of followers to attempt the restoration of stability as an essential input to adaptation; it refers to creativity, learning and support; there is a potential for additional insights from exploring follower motivations in enabling adaptability.

6.2.3 Sub-theme: Positive outcomes of disruption

6.2.3.1 Research findings

Research participants from the operations analysis group articulated that they changed their perspective and were open to doing things differently. The disruption introduced a new context that changed their views, making them more amenable to adopting new working methods.

Research participants in the operation analysis groups articulated how the impacts of disruption motivated them to take urgent steps towards adaptation. The disruption of the national lockdowns created immediate pressure in the operational environment, creating an urgency for action to adopt new ways of working.

6.2.3.2 Inputs from literature

A state of emergence and self-organisation is preceded by disequilibrium created by disruption; actions need to be amplified so that their impact can spread throughout the organisation (Rosenhead et al., 2019). Post the disruption, the organisation self-organises and reconstitutes itself and applies innovation at scale; innovation becomes a new way of operating supported by stabilising feedback (Lichtenstein et al., 2006). Operational leadership have a formal role in accommodating change by adopting it and not resisting; this supports scaling and changes in ways of working(Uhl-Bien & Arena, 2018).

6.2.3.3 Conclusion

Research participants' evidence confirms what the literature articulates regarding innovation that scales as ways of working changes due to the CAS that adapts and self-organises (Rosenhead et al., 2019). Operational leadership adopts innovation for it to scale (Uhl-Bien & Arena, 2018). An interesting viewpoint was feedback on the impact of urgency and a change in perspective to motivate innovation adoption. This viewpoint on follower perception regarding urgency and shift in perspective is a potential further insight into the CLT as it is not stipulated in the literature considered for this literature study.

6.3 Discussion of research sub-question two: Leadership and Organisational Attributes

Uhl-Bien & Arena (2018) stipulate leadership principles and practices that will influence adaptive outcomes. Research sub-question two explores the followers' perspective on culture and leadership during disruption and adaptation. Based on the research aim to identify potential extensions to complexity leadership theory within the leadership process, only one theme from the findings is associated with the follower's perception of leadership. Table 31 is an overview of themes linked to the research sub-question.

Table 31: *Overview of research sub-question and themes*

Research sub-question	Themes	Sub-themes
How do followers perceive leadership during disruption and adaptation in a complex adaptive system?	Leadership and Organisational Attributes	Communication

Note. The researcher's compilation of sub-research questions and matching them and sub-themes.

6.3.1 Sub-theme: Communication

6.3.1.1 Research findings

Excluding the product roles analysis group, research participants from the remainder of the analysis group articulated positive sentiments about their leader's communication during the disruptive period. The first exciting point shared by participants is the importance of being engaged by their leaders; this created a connection with them. They also articulated that those leaders went beyond just giving them instructions about what they needed to do; they articulated the reason behind what they required from them and its link to a larger strategic objective. They also contextualised the disruption, which helped the research participants understand its impact and what they needed to do. This resulted in the research participants being motivated and inspired to take action to adapt to the disruption.

Research participants from the product roles analysis group shared negative sentiments about their leader's communication. The evidence from the interviews was presented in two ways. The first was that even though the leader was communicating, there needed to be higher trust that the leader was authentic and that what they articulated would not occur. The second was that the leader was not communicating and helping the research participants understand what was happening, what they needed to do, and how it tied to a broader strategy.

6.3.1.2 Inputs from literature

Strategies and behaviours can take advantage of the dynamic capabilities of complex adaptive systems (Uhl-Bien & Marion, 2009). Adaptive dynamics are entangled with the bureaucratic administrative functions of an organisation, and interaction between these functions can lead to emergent outcomes (Uhl-Bien et al., 2007).

Entrepreneurial leadership involves creating new ideas and innovative solutions as a response to external or internal pressures to innovate (Uhl-Bien & Arena, 2017). Operational leadership refers to individuals in formal managerial roles that look after planning, task allocation and managing the organisation's strategy (Uhl-Bien & Marion, 2009). Operational leadership also has a formal in accommodating change from an adaptive system (Uhl-Bien & Marion, 2009). Enabling leadership bridges and links innovation into the organisation to scale new ideas (Uhl-Bien & Arena, 2017).

Enabling leaders' principles and practices include applying complexity thinking, leveraging network structures, engaging with complexity dynamics, leveraging adaptive tension linking up individuals and enabling adaptive space (Uhl-Bien & Arena, 2017). Lichtenstein (2016) articulate behaviours to support the conditions of emergence. Disrupting existing patterns, encouraging and supporting new ideas, sensemaking and sense-giving by interpreting disruption and applying storytelling to help peers and networks in the organisation make sense of it (Lichtenstein & Plowman, 2009). This activity stabilises feedback, which ties to legitimising the innovation or change (Lichtenstein & Plowman, 2009).

6.3.1.3 Conclusion

The findings collected from sub-research question two identified three sub-themes that articulated follower perceptions of leadership and organisational attributes. Two of them were

articulations from research participants on care demonstrated by leaders and leadership qualities that impacted them. A sub-theme identified by the researcher as being relevant to complexity leadership theory was the sub-theme on communication. CLT covers a wide range of leadership behaviours within administrative, enabling and entrepreneurial leadership and supports adaptive outcomes (Uhl-Bien & Arena, 2018).

The link to the literature was from the evidence shared by research participants on leaders' ability to communicate and help them make sense of the disruption. The leaders shared the context of the disruption and gave strategic purpose to the initiatives that contributed to the adaptive process. This ties to the leadership behaviours articulated Lichtenstein (2016) of sense-making and sense-giving by interpreting the disruption.

6.4 Discussion of sub-research question three: Group and Leadership Dynamics

Interactions in a CAS are non-linear; they have feedback loops and feed on themselves (Aritua et al., 2009). Interactions can be negative or positive and influence future behaviour (Cilliers & Preiser, 2016). Amplification in emergence results in scaling future behaviour to ensure adaptive outcomes; whereas conflict among individuals facilitates this process or dampens it (Uhl-Bien, 2021).

Sub-research question three aims to explore if the follower perspective can offer more insights into the influence of leader-follower and group dynamics on emergence and adaptive outcomes. Findings from the three themes will be presented separately and given the common link in literature; this will be consolidated for all sub-themes. Table 32 is an overview of themes linked to the sub-research question

Table 32: Overview of research sub-question and themes

Research sub-question	Themes	Sub-themes
What are followers' experiences of leadership and team dynamics during disruption and adaptation within a complex adaptive system?	Group and Leadership Dynamics	Team dynamics
		Adverse leader-follower dynamics
		Positive leader-follower dynamics

Note. The researcher's compilation of sub-research questions and matching them and sub-themes.

6.4.1 Sub-theme: Team dynamics

6.4.1.1 Research findings

All four analysis groups had research participants who articulated that teams were developing better alignment and collaboration in adapting to disruption. Research participants articulated a heightened level of care experienced as individuals extended support offers. Some research participants shared that they developed alliances, given the importance of adaptive initiatives and the level of collaboration required to solve them. Research participants also expressed improved levels of alignment, and they particularly noted the danger of a team that pulls in different directions and its inability to achieve what is required to manage disruption.

The operations support and product roles analysis groups had research participants who articulated that disruption resulted in leadership changes and high-pressure workloads that resulted in team members resigning. One research participant articulated that they were the only individuals to remain, and the team consisted of individuals who had replaced the original team. Those new members only stayed briefly as they could not cope with the high work pressure.

6.4.2 Sub-theme: Adverse leader-follower dynamics

6.4.2.1 Research findings

Research participants in the operations role analysis group articulated that despite the higher frequency of meetings, there wasn't sufficient opportunity to maintain a relationship with their leader. During the disruption, historical ceremonies changed due to proximity limitations.

When one of the research participants was transferring teams, parting ways with their leader was articulated as feeling cold and distant.

Research participants articulated that they applied an approach of giving individuals in their team autonomy to solve problems. This was incredibly challenging given the pressure created during disruption, and they got to that point by doing it incorrectly initially and trying to micro-manage their teams. There was also an event shared about a research participant's leader bypassing them due to pressure to deliver and work directly with their direct reports, which created tension between them and their leader.

Some research participants articulated that they needed a better relationship with their leader. Some developed tension resulted from the leader bringing in new team members, and the selection process needed to be more transparent. Some of the evidence was an articulation of intense disagreement articulated by research participants in the product role analysis group; however, based on the narrative they shared, this was the result of a relationship that was already troubled before the disruption occurred; it resulted in challenges delivering initiatives to manage disruption.

6.4.4 Sub-theme: Positive leader-follower dynamics

6.4.4.1 Research findings

Research participants in operations and operations roles analysis groups shared that they gained a new perspective of their leaders. Before the disruption, they had a less-than-favourable view of their leader, which changed for them during the disruption and adaptation. Some of the reasons for the changing perspective were empathy, that they were also managing a new challenge as best they could, and that one of the research participants had to fulfil broader leadership tasks that made them gain a new perspective on the level of responsibility of their leader. This increased their respect for their leader, giving them a new understanding of what they have managed in their role.

Research participants reflected on the importance of leadership when articulating what they went through during disruption and adaptation. They acknowledged that leadership has a role to play in managing the impact of disruption and that its level of responsibility is large, given the outcomes it can influence regarding the people it is responsible for leading.

One of the research participants mentioned leadership's ability to lift up research participants to see the bigger picture and not remain in operational details as inspirational leadership action they observed from their leader. One of the research participants in the technology analysis groups articulated that they were inspired by their management of the disruption and reassured them and everyone else in their department that they would overcome disruption challenges.

6.4.4.2 Inputs from literature

Once a CAS is pushed to disequilibrium by disruptive conditions, individuals in the system will start looking for solutions (Uhl-Bien, 2021). Individuals will start to experiment until they find an adaptive solution; this process can occur in the entrepreneurial system or the operational system (Uhl-Bien, 2021). The amplification phase involves conflict amongst individuals; a positive outcome from this process increases a positive feedback loop that will scale the change in the organisation (Lichtenstein, 2016). CLT addresses the actions leadership should take to ensure conflict in amplification results in adaptive outcomes at scale (Rosenhead et al., 2019).

CLT positions that leadership has a role within stages of the emergence of a CAS, specific leadership behaviours and principles are recommended to enable and influence the emergence and adaptive outcomes (Lichtenstein & Plowman, 2009; Uhl-Bien & Arena, 2017). Tourish (2019) argues that the depiction of leadership in CLT is characterised in non-complex terms; the assumption that leaders can exercise influence others without the complexities of leader-follower dynamics is an oversimplification. CLT does indicate that the process of emergence has conflict as part of the creative process; however, leader-follower dynamics can have underlying disputes that extend beyond the creative process, and these need to be understood to mitigate resistance (Tourish, 2019).

Within leader-follower dynamics, each party has interests, and this differentiation in interests can result in confrontation, oppression and conflict (Tourish, 2019). The priorities of individuals in leadership roles and the perspectives of followers affected by their actions need to be interrogated and understood as it can dampen amplification within emergence (Rosenhead et al., 2019).

Followers exercise autonomy to engage in the act of followership; this even applies to socially constructed leaders-follower roles as suggested by CLT (Tourish, 2019). Even though leadership in CLT is defined as a process and influence can emanate beyond defined roles of hierarchy, conflict is still a reality (Tourish, 2019). Although some conflicts can be resolved, those driven by historical organisational interests will continue to cause tension (Tourish, 2019).

Followership is not a passive choice but rather a strategic choice made by individuals based on perceived benefits (Bastardo & Van Vugt, 2019). ELT articulates that the evolutionary dynamics of leaders and followers emanate from ancestral processes of leaders proposing coordination tasks and followers choosing the one they assume will be successful. ELT articulates insights on how leadership and followership strategies evolved to address coordination and cooperation challenges (Bastardo & Van Vugt, 2019). Factoring in adaptability and mutual benefit can foster environments that can resolve conflict and prioritise solving mutual goals (Van Vugt et al., 2008).

The cognitive structures that inform leader and follower perceptions can also play a role in improving the LMX between leaders and followers (Xu et al., 2019). IFTs and ILTs can shape how leaders and followers interact; perceptions between leaders and followers are influenced by observed attributes that will determine expectations and interpersonal dynamics (Sy, 2010).

Followers' behaviours can actively shape the quality of LMX relationships with leaders; this can be driven by followers demonstrating attributes in line with positive IFTs (Khan et al., 2020). Followers who engage proactively, are enthusiastic, motivated, and challenge leadership not in terms of insubordination but to contribute to workable solutions will foster a resilient, trust-based relationship with their leaders (Oc et al., 2023).

6.4.4.3 Conclusion

Group dynamics in the form of team and leader-follower dynamics can positively or negatively influence working towards adaptive outcomes, as shared by research participants. CLT articulates that conflict is part of the creative process to scale adaptive outcomes in the organisation (Lichtenstein & Plowman, 2009). However, Tourish (2019) argues that leader-

follower dynamics are complex, and conflict can be driven by underlying actors' interests of leaders and followers.

Research participants articulated this in both a positive and negative light. They mentioned historical conflicts also playing out during disruption and adaptation and how this affected the team to the extent that some individuals exited it. Some research participants articulated a positive experience as they also mentioned their changing perceptions, resulting in a better understanding of their leader's intentions and struggles, fostering positive dynamics.

ELT, IFT and LMX literature provide insights on how perceptions and behaviours can foster better leader-follower dynamics, and organisations can take steps to implement ways of working based on these insights (Bastardo & Van Vugt, 2019; Foti et al., 2017; Xu et al., 2019). According to the researcher, findings from sub-research question three's exploration indicate that extending leader-follower insights that address are themselves part of the complexity within the leadership process in CLT warrant further research as leader-follower dynamics can dampen amplification due to follower commitment (Tourish, 2019).

6.5 Discussion of sub-research question four: Role Perceptions and Follower Personal Experience

Wolfram Cox et al. (2022) proposed future research on pre- and post-disruption practices to encourage leadership emergence by individuals not expected to drive influence. Leaders and followers interact with organisational actors, and these identities are going through a co-construction process driven by relational interactions (Tourish, 2019).

Research sub-question three aims to explore leadership emergence from followers' perspective to determine if it can offer additional insights articulated by CLT. Sub-research question four was linked to two themes. Therefore, findings from these two themes are shared separately, with a combined literature input interpretation and conclusion section for the two themes. Table 33 is an overview of themes linked to the sub-research question.

Table 33: Overview of sub-research question and themes

Research sub-question	Themes	Sub-themes
What are the personal reflections of followers regarding their roles during disruption and adaptation within a complex adaptive system?	Follower Personal Experience	Personal impacts to disruption
		Emotive Impacts
		Follower growth
What are the personal reflections of followers regarding their roles during disruption and adaptation within a complex adaptive system?	Role Perceptions	Follower ambitions
		Role expansion

Note. The researcher's compilation of sub-research questions and matching them and sub-themes.

6.5.1 Role Perceptions

6.5.1.1 Sub-theme: Follower ambition

6.5.1.1.1 Research findings

Research participants said they had career ambitions, which had some influence on their commitment to driving adaptation post-disruption. One participant articulated that the COVID-19 disruption limited their career opportunities and even resulted in friction with their leaders; they suspected they were deliberately trying to limit their career aspirations. A research participant who mentioned adverse leadership dynamics also articulated that they left their department because they doubted their leader would support their ambitions to be promoted to a more senior role.

A research participant in the operations role analysis group said they no longer enjoyed their role. They do not attribute their feelings towards their role to the disruption. They were also candid about lacking maturity during that period.

6.5.1.2 Sub-theme: Role expansion

6.5.1.2.1 Research findings

Research participants in all four analysis groups articulated that they experienced a change in perspective of the impact of their roles during the adaptive process. Disruption introduced ways of working with additional departments, expanding their firsthand experience of their impact on the business. They shared that disruption created focus on their department and contributed to their understanding of the importance of their role in the organisation. Research

participants articulated that the adaptive process also introduced new collaboration partners, and their experience contributed to learning about the potential impact their role can also make on the organisation; they realised they could contribute to more initiatives than before the disruption.

Research participants from the operations, operational support and product role analysis groups articulated role expansion. The first form of expansion shared was to interact with new stakeholders and a more comprehensive network during the adaptive process, as technology requirements had to change given new customer and operational requirements. The second form of expansion articulated was that the research participants took on more responsibilities in the adaptive process. They had to expand their knowledge beyond operations and understand information-related challenges. One of the research participants shared the third form of expansion was that their role expanded into leadership responsibilities as they had to solve coordination challenges during the adaptive process.

6.5.2 Follower Personal Experience

6.5.2.1 Sub-theme: Personal Impacts to disruption

6.5.2.1.1 Research findings

Research participants in all four analysis groups articulated that COVID-19 disruption impacted their personal lives. Research participants shared that the disruption dramatically affected home life routines, including integrating the work environment into the home environment. A common articulation was the anxiety concerning their health, given the spread of COVID-19 and concern for family members who were infected.

Research participants articulated commitment to help customers as they observed the impact disruption would have on them. Research participants in product role analysis groups articulated their commitment to ensuring new product offerings are available for customers as they struggled due to the impact of their livelihoods. The research participants in the operations role analysis group articulated how they committed to customer service to reassure customers that they still have support from a service provider.

6.5.3 Sub-theme: Emotive impacts

6.5.3.1 Research findings

Research participants articulated that managing disruption was challenging. Evidence from the operations and operations support analysis groups articulated that the sudden changes introduced by disruption and the complexity of the number of frontline advisors that required a shift in their daily operating routine were challenging.

Research participants articulated that the volume of work and the increased pace of work introduced by disruption was overwhelming. Research participants acknowledged that they had managed their energy levels to ensure they were calm to the point of being ineffective.

An operations role analysis group research participant articulated high stress levels to manage disruption. The pace of the impacts of the changes and the pressure to implement adaptive changes created high levels of anxiety and stress. Research participants articulated that they had to find a way to manage.

6.5.4 Sub-theme: Follower growth

6.5.4.1 Research findings

Research participants from the operations, operations support, and product roles analysis groups articulated an improvement in their skills. One of the skills articulated by the research participants was the ability to influence their stakeholders, as this was required during the adaptive process. Research participants also articulated improved effectiveness in managing large workloads and working virtually from their residence versus the office.

In the process of adaptation research, participants from the operations support and product roles analysis groups articulated that their understanding of the organisation improved. The research participants took on additional responsibilities, and in working with a broader network, their contribution increased, and in the process, they learnt more about how the organisation works.

6.5.5 Input from literature

Leadership emergence occurs during far-from-equilibrium dynamics when a system experiences disruptions and transitions to equilibrium (Wolfram Cox et al., 2022). Leadership emerges to influence the organisation to adapt as it reaches a new equilibrium (Wolfram Cox et al., 2022). Leadership emergence is not attributed to leadership roles defined by organisational hierarchy; it is a set of behaviours that any individual in the organisation can exhibit (Wolfram Cox et al., 2022). Tourish (2019) articulates that leadership is a socially constructed phenomenon where roles are co-created and refined through interaction between leaders and followers.

Traditional views of leadership are static; however, there are alternative views that leadership can shift with the leader-and-follower relationship (Uhl-Bien et al., 2014). Leadership identities are dynamic and shift between leaders and followers; leadership identity is a social construct with dependencies. Individuals need to see themselves as leaders, and their environment and colleagues need to acknowledge their leadership identity for it to be constructed (DeRue, 2011). ELT also articulates that modern organisations need to align with ancestral social system practices that enable dynamic leader identities (Bastardo & Van Vugt, 2019).

Leaders and followers actively shape leadership through constructive dynamic and contextual interactions (Uhl-Bien et al., 2014). Identifying leadership as a social construction that can enable fluid leader-follower identities depending on context (DeRue & Ashford, 2010). ELT also supports the social construction of leadership roles (Bastardo & Van Vugt, 2019). Within its literature, leadership roles are not fixed; they change depending on environmental pressures and individual competencies (Oc et al., 2023a). Individuals adapt to lead depending on the requirements of specific contexts (Bastardo & Van Vugt, 2019).

Follower beliefs also influence the production of leadership as they need to feel empowered to step into a leadership role and foster constructive, upward communications that could be critical (Carsten et al., 2010). Organisational culture and the self-confidence of followers are dependencies for leader co-production dependencies of followers (Carsten & Uhl-Bien, 2012). Organisations are made of structures still informed by hierarchy; this mismatch to evolutionary insights of social structures that accommodate fluid leader-follower identities can limit adaptive leadership (Oc et al., 2023a). This is a concern also raised by Tourish (2019) regarding the

application of CLT in the business environment. This could explain Rosenhead et al. (2019) concern about the limited examples of organisations that have successfully applied CLT.

6.5.6 Conclusion

Research sub-question four aimed to explore follower perspectives of their roles during disruption and adaptation. CLT articulates that leadership in a CAS is a process that is not limited to predefined roles (Rosenhead et al., 2019). Leader-follower literature can complement CLT in the articulation of adaptive leadership. It provides insights on social practices that enable fluid leadership and follower roles and the need for follower beliefs to motivate stepping into leadership tasks based on context (Oc et al., 2023a). The findings provided evidence that followers with low ambition due to dissatisfaction with their roles made them disengaged from pursuing any role expansion opportunities. The feeling of being stressed and overwhelmed is not material as they still articulated a commitment to helping the customers and contributing to adaptive solutions.

A noteworthy observation from the findings is that followers articulated improving their skills and expanding their roles to reach out to networks and find adaptive solutions to the challenges caused by disruption. They also articulate that their roles expanded to include leadership responsibilities. Evidence of a supportive social environment can be identified in the findings on leader-follower dynamics from sub-research question three (Oc et al., 2023a). Based on the findings, supportive and inspirational leadership can impact role expansion (Carsten & Uhl-Bien, 2012). The findings on follower role expansion to leadership demonstrate that ELT and constructionist leadership constructs can be extended to CLT. Findings on adverse role perceptions warrant further research to explore their dampening effect on emergence.

6.6 Research Findings Discussion Overall summary

Discussing research findings helped answer the sub-research questions and, as a result, the principal research question.

By comparing the research findings with the literature, four outcomes resulted from the process: confirmation with CLT literature, confirmation with leader-follower literature, not

relevant to literature and extension to literature. The table below provides a graphic view of the findings identified in Chapter Five. There will be a table for each by sub-research questions and matching themes.

Table 34: Findings conclusions for research sub-question one

Impacts to disruption					
Themes	Findings	Confirmation of CLT literature	Confirmation of leader-follower literature	Irrelevant to literature	Extension to literature
Disruption business impact	Followers experienced chaos in their work environment.	x			
	Follower experienced operational impacts	x			
	Follower experienced high levels of intensity	x			
	Ways of working changed especially communication	x			
	Disconnection to colleagues	x			
Disruption countermeasures	Learning and adapting to overcome disruption	x			
	Restoring business performance				x
	Pace of innovation increased after disruption	x			
	Leadership played a role in providing direction after disruption	x			
	Investing in technology after disruption	x			
Positive outcomes of disruption	New perspectives on previously held assumptions	x			
	Disruption created focus and urgency				x

Note. The researcher compiled sub-research question findings and compared them to the literature.

Table 35: Findings conclusion for research sub-question two

Leadership and Organisational Attributes					
Themes	Findings	Confirmation of CLT literature	Confirmation of leader-follower literature	Irrelevant to literature	Extension to literature
Communication	Leadership communication is inspiring	x			
	Leadership communication negative sentiment	x			

Note. The researcher compiled sub-research question findings and compared them to the literature.

Table 36: *Finding conclusions for research sub-question three*

Group and Leadership Dynamics					
Themes	Findings	Confirmation of CLT literature	Confirmation of leader-follower literature	Irrelevant to literature	Extension to literature
Team dynamics	Collaborating to adapt and address adaptation		x		
	Pressure resulting in team member exists		x		
Adverse leader-follower dynamics	Widening relationship with leaders		x		
	Loss of autonomy		x		
	Friction with their leader		x		
Positive leader-follower dynamics	Gaining new perspectives		x		
	Reaffirming the importance of leadership		x		
	Leadership inspiration		x		

Note. The researcher compiled sub-research question findings and compared them to the literature.

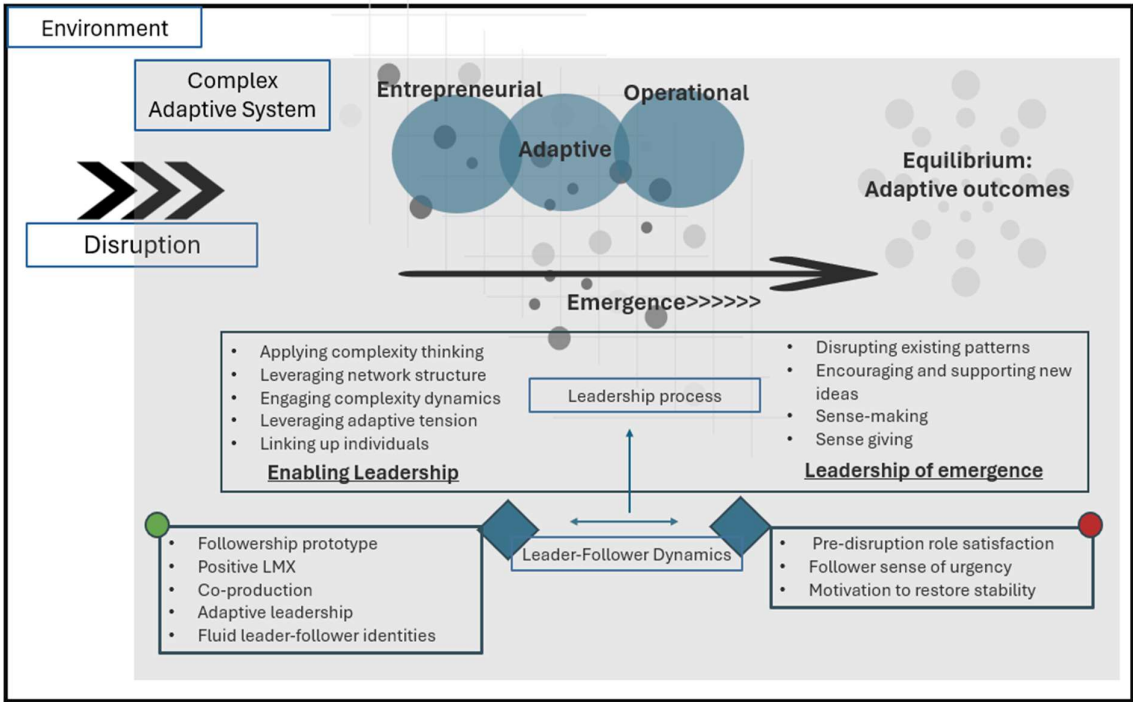
Table 37: *Findings conclusion for research sub-question four*

Role Perceptions					
Themes	Findings	Confirmation of CLT literature	Confirmation of leader-follower literature	Irrelevant to literature	Extension to literature
Follower ambition	Follower career ambitions				x
	Dissatisfied with their roles				x
Adverse leader-follower dynamics	Acknowledge the importance of their role		x		
	Taking on additional activities in the adaptive process	x	x		
Follower Personal Experience					
Personal impacts of disruption	Impact on personal lives			x	
	Commitment to help customers			x	
Emotive impacts	Disruption and adaptation			x	
	Disruption is overwhelming			x	
	Disruption causes stress and pressure to deliver			x	
Follower growth	Improvement skills and effectiveness	x	x		
	Expansion of understanding	x	x		

Note. The researcher compiled sub-research question findings and compared them to the literature.

The conceptual framework presented below is based on the conclusion from the comparative analysis in this chapter. The red dots represent an extension of the literature, and the green dots are the integrations between CLT and leader-follower literature.

Figure 6: *Conceptual framework*



Note. The conceptual model compiled by the researcher is based on comparative analysis and discussion of findings and literature in Chapter Six.

CHAPTER 7: CONCLUSION

7.1 Introduction

This chapter presents the research outcomes based on the comparative analysis of the research findings and literature discussed in Chapter Six. This research report explored follower perspectives during disruption and adaptation in a complex adaptive system. The research setting was financial services organisations in SADC during the COVID-19 outbreak. The units of analysis were professional and middle managers split into four analysis groups: individuals in operational roles, individuals in operational support roles, individuals in product management roles and individuals in technology enablement roles.

Chapter Seven will present research conclusions on each sub-research question articulated in Chapter Three. One of the research aims was the development of a conceptual framework on the influence of leader-follower dynamics on the leadership process in the emergence phase. The theoretical conclusions of each sub-research question will also be presented, including any additions to the literature, extensions, confirmations and potential refinements. The Chapter will also include recommendations for management, study limitations and suggestions for future research.

7.2 Theoretical Conclusions

7.2.1 Conclusion to research sub-question one: Impacts of Disruption

Sub-research question one explored disruption and adaptation in a complex adaptive system from the followers' perspective. The researcher intended to examine whether followers observe similar characteristics within the research setting mentioned in Chapter Four. Complex adaptive systems function at the edge of chaos and can respond to external changes due to their self-organisation ability. They create new patterns or outcomes that did not exist before, resulting in adaptation and innovation (Schneider & Somers, 2006).

Research participants' experiences of disruption align with the academic literature on the first phase of emergence, noting a destabilising National Lockdown (Mendes et al., 2016). Research participants acknowledged that new regulations and constraints disrupted their equilibrium, leading to creative problem-solving. McCarthy et al. (2006) state that systems are

most creative when far from equilibrium. This was supported by research participants when they articulated how they managed disruption. Participants emphasised the role of technology in preventing chaos and highlighted operational leadership's importance in scaling innovations.

Research participants' novel insight is their motivation to restore stability, suggesting potential for further exploration of follower motivations in adaptability. Evidence confirms that innovation scales through changing work practices within complex adaptive systems, supported by operational leadership. Additionally, participants provided new perspectives on the urgency and motivation for adopting innovation, which could inform CLT.

7.2.2 Conclusion to research sub-question two: Leadership and Organisational Attributes

Sub-research question two explored the potential insights from the lived experience of followers in the leadership process within a complex adaptive system. CLT has wide-ranging literature articulating how leadership can influence organisations to adapt to disruptions; they articulate the principles and practices leadership can apply to impact adaptation deliberately (Rosenhead et al., 2019). The research setting of the SADC Financial Services sector during the COVID-19 pandemic provided an opportunity to explore the perspectives of followers who experienced disruption and adaptive outcomes in this context.

The findings collected from sub-research question two identified three sub-themes that articulated follower perceptions of leadership and organisational attributes. The researcher identified only one sub-theme relevant to CLT: the research participants' articulation of leadership communication.

The conformation with literature was from the evidence shared by research participants on leaders' ability to communicate and help them make sense of the disruption. They articulated that their leaders shared the context of the disruption and gave strategic purpose to the initiatives that contributed to the adaptive process. This ties to the leadership behaviours articulated by Lichtenstein (2016) of sense-making and sense-giving by interpreting the disruption.

7.2.3 Conclusion to research sub-question three: Group and Leadership Dynamics

The study of followers in leadership theory has shown that followers offer new perspectives on understanding leadership, given their impact on leader-follower dynamics (Oc et al., 2023b). The third sub-research question aims to understand followers' experience of the leader-follower dynamics phenomenon to determine whether it offers additional insights into the leadership process in a complex adaptive system.

CLT articulates that conflict is part of the creative process to scale adaptive outcomes in the organisation (Lichtenstein & Plowman, 2009). However, Tourish (2019) argues that leader-follower dynamics are complex, and conflict can be driven by underlying actors' interests of leaders and followers.

Research participants articulated this in both a positive and negative light. They mentioned historical conflicts also playing out during disruption and adaptation and how this affected the team to the extent that some individuals exited it. Some research participants articulated a positive experience as they also mentioned their changing perceptions, resulting in a better understanding of their leader's intentions and struggles, fostering positive dynamics.

ELT, IFT and LMX literature provide insights on how perceptions and behaviours can foster better leader-follower dynamics, and organisations can take steps to implement ways of working based on these insights (Bastardo & Van Vugt, 2019; Foti et al., 2017; Xu et al., 2019). According to the researcher, findings from sub-research question three's exploration indicate that extending leader-follower insights that these dynamics are themselves part of the complexity within the leadership process in CLT warrants further research as leader-follower dynamics can dampen amplification due to follower commitment (Tourish, 2019).

7.2.3 Conclusion to research sub-question four: Role Perceptions and Follower Personal Experience

Leadership in a complex adaptive system is a process, and any individual can engage in it to influence the organisation to adapt (Rosenhead et al., 2019). The interaction of leaders and followers defines the leadership process, and the self-organising characteristics of a complex adaptive system enable this process to emerge to influence adaptive outcomes (Wolfram Cox

et al., 2022). Sub-research question four aimed to explore leadership emergence from the followers' perspective.

The findings provided evidence that followers with low ambition due to dissatisfaction with their roles were disengaged from pursuing role expansion opportunities. The feeling of being stressed and overwhelmed is not material, as they still articulated a commitment to helping the customers and contributing to adaptive solutions.

The findings were interesting because followers articulated improving their skills and expanding their roles to reach out to networks and find adaptive solutions to the challenges caused by disruption. They also articulated that their roles expanded to include leadership responsibilities.

Evidence of a supportive social environment can be identified in the findings on leader-follower dynamics from sub-research question three (Oc et al., 2023a). Based on the findings, supportive and inspirational leadership can impact role expansion (Carsten & Uhl-Bien, 2012). The findings on follower role expansion to leadership demonstrate that ELT and constructionist leadership constructs can be extended to CLT. Findings on negative role perceptions warrant further research to explore their dampening effect on emergence.

7.2.4 Conclusion to the principal research question

Research sub-questions one to four intend to answer the principle research question: **What are the lived experiences of followers within the context of a complex adaptive system during periods of disruption and adaption?**

The findings from the second research sub-question reveal that followers perceive leadership communication as impactful in a complex adaptive system during disruption. Research participants indicated that effective communication by leaders, which included contextualising the disruption and providing strategic purpose, helped them navigate the adaptive process. This aligns with the sense-making and sense-giving leadership behaviours described by (Lichtenstein, 2016), emphasising the importance of clear communication in fostering understanding and adaptation amongst followers.

Further exploration into the leader-follower dynamics, as addressed by the third research sub-question, highlighted the complexity and nuance of these interactions. Research participants reported positive and negative experiences, illustrating that historical conflicts and differing interests could hinder or enhance team dynamics and adaptation efforts. Positive dynamics emerged when followers better understood their leaders' intentions, leading to improved perceptions and collaboration. The insights from ELT, IFT, and LMX literature underscore the significance of managing perceptions and behaviours to foster better leader-follower dynamics, which are integral to the leadership process in a complex adaptive system (Bastardo & Van Vugt, 2019; Foti et al., 2017; Xu et al., 2019).

The study also delves into the emergence of leadership from the followers' perspective, as explored in the fourth research sub-question. Findings indicate that low ambition and dissatisfaction with roles led to disengagement, yet many followers still showed commitment to helping customers and finding adaptive solutions. Interestingly, some followers expanded their roles and assumed leadership responsibilities, driven by a supportive social environment and inspirational leadership. This suggests that role expansion and skill improvement contribute to leadership emergence in a complex adaptive system.

Overall, followers' lived experiences within a complex adaptive system during disruption and adaptation are multifaceted. Effective leadership communication, the intricate dynamics between leaders and followers, and the environment's supportiveness shape these experiences. The findings highlight the need for further research on the impact of negative role perceptions and the potential of extending ELT and constructionist leadership constructs to CLT, as they contribute to understanding the dampening effects on leadership emergence and amplification.

7.3 Research contributions

This research report aims to gain new insights from the lived experience of followers experiencing disruption and adaptation within a CAS. The contributions to literature will be within the scope of complexity and follower leadership literature. They will be based on the identified themes from the findings and presented in three groups: additions, refinements, and extensions to existing academic literature.

7.3.1 Additions to academic literature

Based on the research methodology selected, the research setting, and the selected participants, this research report is different to the research studies articulated in the literature. Based on the novel report, the conclusions that confirm existing literature can be considered additions to academic literature. The additions have been compiled in Table 38 below.

Table 38: *Potential additions to academic literature*

Theoretical Construct	Themes	Sub-themes
Complex Adaptive System	Impacts to disruption	Disruption business impact Disruption countermeasures
Leadership of emergence	Leadership and Organisaional Attributes	Communication
Complex leadership theory	Role Perceptions	Role expansions
	Follower Personal Experience	Follower growth

Note. The researcher compiled themes identified as additions to academic literature

7.3.2 Refinements to academic literature

Based on the outcomes of the findings and comparison to existing literature, there are potential refinements to complexity leadership literature. Based on the findings, these themes linked to leader-follower literature are potential refinements that will add more nuance to the leadership process in complexity leadership literature. The refinements have been presented in Table 39 below.

Table 39: *Potential refinement to academic literature*

Theoretical Construct	Themes	Sub-themes
Complexity leadership theory	Group and Leadership Dynamics	Team Dynamics Adverse leader-follower dynamics Positive leader-follower dynamics
	Role Perceptions	Role expansion
	Follower Personal Experience	Follower growth

Note. The researcher compiled themes identified as refinements to academic literature

7.3.3 Potential extension to academic literature

Based on the outcomes of the findings and comparison to existing literature, there are potential additions to complexity leadership literature. These themes could not be identified in complexity and leader-follower literature. They are additional insights on the leadership

process and, therefore, potential extensions to existing academic literature. The extensions have been presented in Table 40 below:

Table 40: Potential extensions to academic literature

Theoretical Construct	Themes	Sub-themes
Complexity leadership theory	Impacts to disruption	Disruption countermeasures Positive outcomes of disruption
	Role Perceptions	Follower ambition

Note. The researcher compiled themes identified as refinements to academic literature

7.4 Recommendations for management

The recommendations for management are based on the theoretical conclusions and where there were refinements and extensions drawn from the comparison between research outcomes and academic literature. The recommendations were directed at business leaders, organisational design specialists and strategy practitioners.

7.4.1 Organisational structure

Traditional organisational structures work counter to enabling distributed leadership. Flatter structures with networked teams will enable individual shifts in leadership roles depending on the context. Cultural support will also be required to support the structure in for individuals in the organisation to be comfortable with taking the lead with their innovative ideas and for individuals in leadership roles to support the shift based on context.

7.4.2 Leadership interventions

Negative leader-follower dynamics can limit innovation; business leaders need to be educated on the influence of followers on leadership. The recommendation is to provide opportunities and encourage their followers to lead on topics aligned with their expertise to build the social norms of their followers leading depending on the context.

Leaders should be equipped with coaching skills to help followers grow towards positive prototypes of being engaged, committed, and productively challenging leadership because they equally own objectives. Leadership development should also assist leaders in creating

working environments to encourage follower commitment and react positively to upward communication that challenges their viewpoints and plans. The ability for healthy conflict will aid the emergence and creative process of achieving adaptive outcomes.

Leadership awareness of their teams' ambitions and motivations should form part of engagements between leaders and followers. Career guidance and mentorship can help address dissatisfaction by using disruption as an opportunity for career development.

7.5 Limitations of the research

This section discusses the limitations of the research report in its entirety. The details of the limitations of research design and methodology are discussed in Chapter Four. The research setting for this study was the financial sector in SADC; research participants were selected based on middle management and specialist roles with a reporting line to a leader. The limitation is that the research outcomes only relate to that specific sector and region.

The research participants are selected with specific roles and defined as followers. The limitation of the research report is that it needs a blended perspective of both leaders and followers.

The research setting is a disruption of the environment through the COVID-19 pandemic. The limitation is that the research report does not evaluate other external disruptions, such as competitors or internal innovation, such as a significant technological change. These sources of disruption could play out differently.

The research report identified sub-themes that were analysed as irrelevant to the scope of the literature. They were personal impacts of disruption and emotive effects. The limitation is that these should have been explored further.

7.6 Suggestions for future research

Based on the theoretical conclusions of this reach report, the suggestion for further research is as follows. Further research is required on the impacts of leader-follower dynamics on adaptive outcomes. Based on the scope, this research report found that a more focused study can provide additional details on the dynamics' nuance. Potentially, a quantitative approach could validate the relationship.

Further research on follower perspectives also includes leader viewpoints and extends the context beyond external disruption. Disruption in a complex adaptive system can emanate from multiple sources, and further research on these could potentially contribute additional insight into the leadership process defined in complexity leadership theory.

This research report identified the following research outcomes with the potential of or extension to the literature: follower ambitions and their potential impacts on followers' sense of urgency and commitment to business results. Further research that will take an in-depth look at follower motivations and their impact on adaptive outcomes can potentially contribute additional insights to complexity leadership theory.

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APPENDIX A: ETHIC CLEARANCE APPROVAL

**Gordon Institute
of Business Science**
University of Pretoria

Ethical Clearance
Approved

Dear Mocheko Chaka,

Please be advised that your application for **Ethical** Clearance has been approved.

You are therefore allowed to continue collecting your data.

We wish you everything of the best for the rest of the project.

[Ethical Clearance Form](#)

Kind Regards

This email has been sent from an unmonitored email account. If you have any comments or concerns, please contact the GIBS Research Admin team.

APPENDIX B: QUALITATIVE LIST OF DESCRIPTIVE CODES

Code	Code Groups
○ ALF_ leadership maturity not sensitive to follower feelings	Adverse leader-follower dynamics
○ ALF_does leadership have visibility of my performance	Adverse leader-follower dynamics
○ ALF_disruption resulted in loss of connection between leadership and followers	Adverse leader-follower dynamics
○ ALF_feedback and criticism to leaders countered with reminding of secure employment	Adverse leader-follower dynamics
○ ALF_Follower tasks cannot be completed due to fear of getting clarity from leader	Adverse leader-follower dynamics
○ ALF_follower wants autonomy to make more decisions	Adverse leader-follower dynamics
○ ALF_groups form out of dissatisfaction with leader resulting in side leadership structures	Adverse leader-follower dynamics
○ ALF_Is broader leadership aware or going to take action against poor leadership	Adverse leader-follower dynamics
○ ALF_leader and follower clash and do not get along	Adverse leader-follower dynamics
○ ALF_Leader becomes transactional in engagements with the team	Adverse leader-follower dynamics
○ ALF_leader is critical and this creates anxiety in followers	Adverse leader-follower dynamics
○ ALF_leader makes promises to drive performance but they are not delivered	Adverse leader-follower dynamics
○ ALF_leader not being practical in execution	Adverse leader-follower dynamics
○ ALF_leader not supporting direct reports even in forums	Adverse leader-follower dynamics
○ ALF_leader passing on pressure to direct reports	Adverse leader-follower dynamics
○ ALF_leader unavailable and commitment given by followers only based on power dynamics	Adverse leader-follower dynamics

○ ALF_leaders taking on roles of followers to manage disruption	Adverse leader-follower dynamics
○ ALF_leadership avoiding responsibility of managing disruption	Adverse leader-follower dynamics
○ ALF_leadership behaviour is abusive	Adverse leader-follower dynamics
○ ALF_leadership claiming transparency not materialising in action	Adverse leader-follower dynamics
○ ALF_leadership direction for what is required is not clear	Adverse leader-follower dynamics
○ ALF_leadership priority based on intent and where they expect to gain the most value	Adverse leader-follower dynamics
○ ALF_leadership words are not matched by their actions	Adverse leader-follower dynamics
○ ALF_level of commitment low due to the low skill levels of employee	Adverse leader-follower dynamics
○ ALF_Organisational leader technically brilliant however people management was not a strength	Adverse leader-follower dynamics
○ ALF_rebellion alignment against leader due to dissatisfied team	Adverse leader-follower dynamics
○ ALF_team struggles with leader when they shift from being transactional	Adverse leader-follower dynamics
○ ALF_widening gap in the relationship with leadership due to the disruption	Adverse leader-follower dynamics
○ CFE_a sense of safety that livelihood is not affected	Care for employees
○ CFE_an organisation that cares for its people	Care for employees
○ CFE_leadership managing pressure and being aligned on prioritising the impacts to employees	Care for employees
○ CFE_people-orientated leadership that focuses on care for people	Care for employees
○ CFE_prioritising the well being of employees during disruption	Care for employees
○ CFE_reflection on the importance of people and care	Care for employees

○ CFE_striking the balance between caring for people and business performance	Care for employees
○ COM_calrity and frequent communication of delivery expected	Communication
○ COM_communication deferred to formal feedback versus team engagement	Communication
○ COM_explaining the why of business goals	Communication
○ COM_high levels of engagement with direct reports or team	Communication
○ COM_leader is visible and communicates directly	Communication
○ COM_making the organisations vision visible and accessible	Communication
○ COM_simplifying the vision for direct reports to understand	Communication
○ DBI_behaviourial challenges from employees	Disruption business impact
○ DBI_challenging operational implications of disruption	Disruption business impact
○ DBI_changing customer expectations and business requirements	Disruption business impact
○ DBI_chaos as a result of disruption	Disruption business impact
○ DBI_complexity to everyday tasks due to disruption	Disruption business impact
○ DBI_customer experience was negatively affected by disruption	Disruption business impact
○ DBI_disruption affected the historical focus on planning and tactics	Disruption business impact
○ DBI_disruption affecting ability to service customers	Disruption business impact
○ DBI_disruption also created anxiety in customers regarding their level of service	Disruption business impact
○ DBI_disruption causes an absence of official leadership structure	Disruption business impact
○ DBI_disruption resulted in employees losing thier jobs	Disruption business impact

○ DBI_disruption resulting in constant change and new working groups	Disruption business impact
○ DBI_disruption resulting in multiple leadership changes	Disruption business impact
○ DBI_disruption results in new entrants and competition	Disruption business impact
○ DBI_disruption results in two centres of power affecting decision making	Disruption business impact
○ DBI_focus on sales has been lost and disruption has impacted future performance	Disruption business impact
○ DBI_higher levels of intensity experienced during disruption	Disruption business impact
○ DBI_impact to business performance as a result of disruption	Disruption business impact
○ DBI_making decisions and repeatedly reversing them	Disruption business impact
○ DBI_Missing visibility of performance in the period of disruption	Disruption business impact
○ DBI_previously productive individuals productivity affected by the new environment created by disruption	Disruption business impact
○ DBI_priorities are affected by disruption	Disruption business impact
○ DBI_Reporting is not consistent and is erratic	Disruption business impact
○ DBI_the nature of the disruption resulted in an unpredictable work environment	Disruption business impact
○ DBI_the way forward is not clear due to the existing disruption	Disruption business impact
○ DBI_ways of working affected by disruption especially communication	Disruption business impact
○ DCM_Attempts at early innovation in the absence of disruption was slow to adopt due to lack of urgency	Disruption counter measures
○ DCM_Being resourceful and resilient to find solutions to disruption	Disruption counter measures
○ DCM_business resilience to disruption and crisis	Disruption counter measures

◦ DCM_clarity of expectations from leadership during disruption	Disruption counter measures
◦ DCM_commitment from individuals to overcome disruption	Disruption counter measures
◦ DCM_create stability in face of disruption and chaos	Disruption counter measures
◦ DCM_culture of an organisation that requires innovation helps manage disruption	Disruption counter measures
◦ DCM_deliver business requirements during disruption	Disruption counter measures
◦ DCM_disruption can increase the importance of every day decisions	Disruption counter measures
◦ DCM_disruption resulted in investment in new technologies	Disruption counter measures
◦ DCM_ensure operating environment is enabled to function during disruption	Disruption counter measures
◦ DCM_follower expresses acknowledgement there will be change	Disruption counter measures
◦ DCM_implementing boundaries to limit impact of disruption on personal lives	Disruption counter measures
◦ DCM_implementing practices to cope with the impacts of disruption	Disruption counter measures
◦ DCM_leader provides guidance on prioritisation during disruption	Disruption counter measures
◦ DCM_leadership experience and relevance of department makes things easier	Disruption counter measures
◦ DCM_leadership providing direction in the chaos caused by disruption	Disruption counter measures
◦ DCM_learning and adapting to overcome the implications of the disruption	Disruption counter measures
◦ DCM_learning to work differently due to disruption	Disruption counter measures
◦ DCM_perspective of yourself should be open to change to adjust to disruption	Disruption counter measures
◦ DCM_pre-planning to prepare for disruption to ensure operational stability	Disruption counter measures

◦ DCM_prepare for disruption is a key take out from followers	Disruption counter measures
◦ DCM_reassuring customers that disruption will not affect their service level	Disruption counter measures
◦ DCM_recontracting to prioritise what will add value because of disruption	Disruption counter measures
◦ DCM_refer to existing networks outside of organisation to get a sense of disruption	Disruption counter measures
◦ DCM_resilience to overcome disruption is inherent in the culture of the country	Disruption counter measures
◦ DCM_role was not different during disruption only change was ways of execution	Disruption counter measures
◦ DCM_shift focus back to getting the business performance to improve	Disruption counter measures
◦ DCM_silos between team members were deliberately removed in order to manage disruption	Disruption counter measures
◦ DCM_support from different departments to solve for disruption.	Disruption counter measures
◦ DCM_technology departments thrive under disruption	Disruption counter measures
◦ EI_anxiety created by disruption regarding job security	Emotive impacts
◦ EI_complexity and disruption is unpleasant	Emotive impacts
◦ EI_coping with the impacts of being micromanaged	Emotive impacts
◦ EI_disengagement during disruption	Emotive impacts
◦ EI_Disruption causes anxiety and seems overwhelming	Emotive impacts
◦ EI_disruption introduced disempowering decision-making processes that caused follower frustration	Emotive impacts
◦ EI_experiencing stress and pressure to deliver	Emotive impacts
◦ EI_follower despondent due to leadership challenges not being addressed	Emotive impacts

○ EI_follower expresses emotional stress from leadership	Emotive impacts
○ EI_frustration that leadership is attempting to replace existing followers	Emotive impacts
○ EI_growth in responsibilities is overwhelming	Emotive impacts
○ EI_in a time of constant change followers' emotions are sensitive	Emotive impacts
○ EI_leadership responsibility is expressed as challenging	Emotive impacts
○ EI_livelihood safe however discomfort with reliance on leader to stay employed	Emotive impacts
○ EI_sense of insecurity even in the face of confirmation of security of livelihood	Emotive impacts
○ FA_approach to work is beyond limits of role and expands to other considerations	Follower ambition
○ FA_arrogance about understanding the business	Follower ambition
○ FA_disatisfaction with current role	Follower ambition
○ FA_make precense felt and become visible in discussions	Follower ambition
○ FA_personal ambition to progress professional career	Follower ambition
○ FG_connecting with the bigger picture and seeing the importance of role in the organisation	Follower growth
○ FG_disruption created renewed energy and motivation to support solutions	Follower growth
○ FG_disruption resulted in reflection that follower is in the correct role	Follower growth
○ FG_dont allow connection with the group over dissatisfaction to override individual principles	Follower growth
○ FG_expanding understanding beyond requirements of current role	Follower growth
○ FG_improvement of skills and effectiveness	Follower growth
○ FG_perception of importance of role increased during resolving disruption	Follower growth

○ FG_see role in new light and focus on its potential contribution	Follower growth
○ LQ_despite external focus leader still aware of responsibilities	Leadership Qualities
○ LQ_genuine relationship with people is good leadership	Leadership Qualities
○ LQ_importance of leadership being aware of what is happening in their department	Leadership Qualities
○ LQ_insights on leading people	Leadership Qualities
○ LQ_leader ,managing external pressures well.	Leadership Qualities
○ LQ_leadership should commit to disruption mitigations	Leadership Qualities
○ LQ_ownership and accountability as the organisation is a personal business	Leadership Qualities
○ LQ_reflection that leadership is reactive to disruption versus being proactive	Leadership Qualities
○ LQ_shift in leadership to be more human and connect versus following up on tasks	Leadership Qualities
○ LQ_The importance of leadership holding people accountable	Leadership Qualities
○ PID_being stuck in transition to a new way of doing things	Personal impacts of disruption
○ PID_clarifying follower operational responsibilities prior to disruption and it primarily involved stakeholder management	Personal impacts of disruption
○ PID_disruption resulted in doing new activities and this also introduced discomfort	Personal impacts of disruption
○ PID_disruption resulted in increased follower commitment to help customers	Personal impacts of disruption
○ PID_disruption resulted in isolation during completing tasks	Personal impacts of disruption
○ PID_disruption also resulting into an impact on personal lives	Personal impacts of disruption
○ PID_due to personal circumstances work participation was limited during disruption	Personal impacts of disruption

○ PID_impact of disruption resulted in focus and removal of distractions	Personal impacts of disruption
○ PID_pretending to be present meanwhile you are disengaged and not committed	Personal impacts of disruption
○ PID_transition during disruption limit ability to integrate to new environment	Personal impacts of disruption
○ PLF_a new perspective on the decisions of leadership	Positive leader-follower dynamics
○ PLF_change in perception from leader on what can be delivered by follower	Positive leader-follower dynamics
○ PLF_follower expresses a view that expectation that leaders know what to do during disruption should be lowered	Positive leader-follower dynamics
○ PLF_follower expresses accepting that leaders are also human	Positive leader-follower dynamics
○ PLF_Follower expresses surprise at the level of commitment from the team to solve the disruption	Positive leader-follower dynamics
○ PLF_follower expresses view of the great responsibility of leaders due to their impact	Positive leader-follower dynamics
○ PLF_follower prefers to work closely with leader to ensure alignment on their decisions	Positive leader-follower dynamics
○ PLF_follower shift from expecting answers from leadership to offering solutions	Positive leader-follower dynamics
○ PLF_good working relationship with leadership	Positive leader-follower dynamics
○ PLF_leader made decisions that helped followers professional growth	Positive leader-follower dynamics
○ PLF_leader matured post disruption and it was easier to connect with them	Positive leader-follower dynamics
○ PLF_leadership led by example and provided inspiration and learnings to manage disruption	Positive leader-follower dynamics
○ PLF_leadership relationship lifts to a more strategic level	Positive leader-follower dynamics
○ PLF_personal relationship with leader motivated resilience through disruption	Positive leader-follower dynamics

○ PLF_relationship with leadership improved on a personal level	Positive leader-follower dynamics
○ POD_disruption creates innovation and organisational resilience	Positive outcomes of disruption
○ POD_disruption generated new perspective on previous held assumptions	Positive outcomes of disruption
○ POD_disruption introduces a need for innovation and it can come at different paces	Positive outcomes of disruption
○ POD_focus and urgency to deliver outcomes during disruption	Positive outcomes of disruption
○ POD_identified positives from the implications of disruption	Positive outcomes of disruption
○ POD_innovation to help the customer	Positive outcomes of disruption
○ POD_productivity levels increased due to new working conditions caused by disruption	Positive outcomes of disruption
○ POD_professional growth as a result of disruption	Positive outcomes of disruption
○ POD_the way the organisation managed disruption created loyalty	Positive outcomes of disruption
○ RE_caution about helping other departments in case support is not successful	Role expansion
○ RE_disruption increase the importance and support of the role	Role expansion
○ RE_disruption resulted in follower getting leadership exposure	Role expansion
○ RE_disruption resulted in access to leadership and first hand account of strategy	Role expansion
○ RE_disruption resulted in role expanding to cover leadership responsibilities	Role expansion
○ RE_follower responsibility increases and complexity and presents opportunities	Role expansion
○ RE_role activities decreased during disruption	Role expansion
○ RE_role expands to take on additional activities to manage disruption	Role expansion
○ TD_challenges with leader result in multiple team resignations	Team dynamics

○ TD_constant change resulting in team politics	Team dynamics
○ TD_continuous changes results in all team members leaving	Team dynamics
○ TD_Decision making structure driven by shareholder and not policy	Team dynamics
○ TD_disruption resulted in silos and disconnection	Team dynamics
○ TD_Disruption results in sudden change in leadership with promise of improved performance	Team dynamics
○ TD_disruptive team members removed from the team	Team dynamics
○ TD_effort in implementing practices to bring the team together	Team dynamics
○ TD_Good team dynamics between team members	Team dynamics
○ TD_internal team dysfunction affecting ability to deliver	Team dynamics
○ TD_leadership priority of gain becomes the main focus of the team	Team dynamics
○ TD_linked by common anxieties caused by disruption	Team dynamics
○ TD_managing teams disagreement and pushback on next steps to manage disruption	Team dynamics
○ TD_multi skills are required to achieve objectives	Team dynamics
○ TD_multiple changes of managers resulted in loss of trust in the team	Team dynamics
○ TD_new teams resulting in loss of positive working relationships	Team dynamics
○ TD_team collaborates to solve challenges caused by disruption	Team dynamics
○ TD_team conflict on execution	Team dynamics
○ TD_team focused on other activities outside of daily work	Team dynamics

○ TD_team more aligned on what is required to achieve outcomes	Team dynamics
○ TD_team supports each other to survive leadership challenges	Team dynamics
○ TD_unity around disengagement from work during disruption	Team dynamics

APPENDIX C: CONSENT LETTER

Dear

I am conducting research on *leader-follower dynamics in the context of complex leadership*. Our interview is expected to last *approximately one hour* and will help us understand *How followers experience the phenomenon of leader-follower dynamics during a response to a crisis*. Your participation is voluntary, and you can withdraw without penalty. By signing this letter, you are indicating that you have permitted for:

The interview to be recorded.

The recording to be transcribed by a third-party transcriber, who will be subject to a standard non-disclosure agreement.

Verbatim quotations from the interview to be used in the report, provided they are not identified with your name or that of your organisation.

The data to be used as part of a report that will be publicly available once the examination process has been completed and

All data is to be reported and stored without identifiers.

If you have any concerns, please contact my supervisor or me. Our details are provided below.

Researcher name: XXXXXX Research supervisor name: XXXXXXXXXXXX

Email: XXXXXXX

Email: XXXXXXX

Phone: _____

Phone: _____

Signature of participant: _____

Date: _____

Signature of researcher: _____

Date: _____

APPENDIX D: CONSISTENCY MATRIX

Research Questions	Section in Literature Review	Data collection tools	Analysis techniques
PRQ: What are the lived experiences of followers within the context of a complex adaptive system during periods of disruption and adaption?	- Uhl-Bien et al. (2014) - Rosenhead et al. (2019) - Oc et al. (2023) - Tourish (2019) - Schneider & Somers (2006)	Semi-structured interview protocol	- Inductive first-level coding - Deductive thematic analysis
SQ1: What do followers observe in their work environment during periods of disruption and adaptation in a complex adaptive system?	- Cilliers (2000) - Mendes et al. (2016) - Swart (2023) - Turner & Baker (2019) - Mccarthy et al. (2006) - Schneider & Somers (2006)	Semi-structured interview protocol	- Inductive first-level coding - Deductive thematic analysis
SQ2: How do followers perceive leadership during disruption and adaptation in a complex adaptive system?	- Uhl-Bien & Arena (2018) - Uhl-Bien & Arena (2017) - Lichtenstein (2016) - Plowman et al. (2007)	Semi-structured interview protocol	- Inductive first-level coding - Deductive thematic analysis
SQ3: What are followers' experiences of leadership and team dynamics during disruption and adaptation within a complex adaptive system?	- Uhl-Bien et al. (2014) - Derue & Ashford (2010) - Oc et al. (2023) - Bastardo & Van Vugt (2019) - McKimm & Vogan (2020) - Sy (2010)	Semi-structured interview protocol	- Inductive first-level coding - Deductive thematic analysis
SQ4: What are the personal reflections of followers regarding their roles during disruption and adaptation within a complex adaptive system?	- DeRue (2011) - Bastardo & Van Vugt (2019) - Uhl-Bien et al. (2014) - Oc et al. (2023)	Semi-structured interview protocol	- Inductive first-level coding - Deductive thematic analysis

APPENDIX E: INTERVIEW GUIDE

Questions	Purpose
Greetings and confirmation of consent. - Do you have any questions about the consent form you signed? - Do you have any other questions before we begin?	Introduction
Confirmation and invite for questions regarding the research and interview. What are your initial thoughts about this research topic?	Align on purpose
What were daily activities during COVID-19? How did you translate direction from your leaders into a plan? Probing questions: - Can you give an example of a specific directive you received and how you acted on it? - Were there any challenges you faced in translating these directions into action?	Confirming follower role
How did COVID-19 affect you at work? Probing questions: - Can you describe a typical day for you during the pandemic? - How did these changes impact your performance and productivity?	Research sub-question 1
How did you and your team manage the crisis? Probing questions: - What specific steps did your team take to adapt to the crisis? - How did communication and ways of working within your team change during this period?	Research sub-question 1
What was your perception of leadership in your organisation during this time? Probing questions: - How did leadership behaviour impact your morale and motivation? - Were there any actions by leadership that stood out to you? - How did their decisions affect your view of their leadership?	Research sub-question 2
What was your perception of your role during this time? Probing questions: - How did your responsibilities change during the pandemic? - Did you feel significant in your role during this period? - How did your sense of responsibility evolve over time?	Research sub-question 4
How did you experience the relationship with leadership during the crises? Probing questions: - Can you describe any memorable interactions with leadership? - Did your relationship with leadership change as the crisis progressed?	Research sub-question 3
How was it after the crisis? Probing questions: - How did your work environment and responsibilities change post-crisis? - What lasting effects, if any, did the crisis have on your role and team? - How do you perceive leadership and your role now compared to before the crisis?	Research sub-question 4
Thank you for your participation. - Is there anything else you would like to add about your experience? - Do you have any final thoughts or reflections on this topic?	Conclusion

