

Rethinking Developmental Management and Organisational change - a complexity informed perspective.

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by

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ABSTRACT

The overarching theme of this dissertation suggests that development failures may be attributable to failures in organisational change. This study challenges the dominant discourse of organisational studies, specifically notions of planned strategic approaches to change. Throughout the dissertation the author adopts a complexity approach to understanding organisational change and assesses the extent to which stories of practitioners reflect notions of complexity. The dissertation proposes a model that challenges current perspective of the dominant discourse of management. The model suggests a complexity informed perspective as an alternative way current way of understanding systems thinking, autonomy and learning.

The findings suggest that stories of practitioners do reflect notions of a complex adaptive process. The complex adaptive process suggests that change occurs through a series of unpredictable local interactions that are influenced by social processes within the social environment. These findings imply that current ways of understanding organisational change need to re-conceptualized to include a more reality informed perspective. This dissertation serves as evidence for the need for more research on organisational change that includes a complexity informed perspectives.

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DECLARATION

No portion of the work referred to in the dissertation has been submitted in support of an application for another degree or qualification of this or any other university or other institute of learning.

CHAPTER 1: INTRODUCTION

1.1 Macro Context

In the field of Development, there appears to be an air of critical reflection brewing among academics and practitioners alike. Economic development has traditionally ascribed to the Jeffrey Sachs approach to development – the notion that developing countries cannot escape poverty without aid (Sachs 2006). Sachs refers to this inability to escape poverty as the “poverty trap” (Sachs 2006). Paul Collier argues along similar lines in his book *“The bottom Billion”*, in which he argues that aid is often ineffective and developing countries will not be able to climb out of their poverty without the help of the G8. Although he departs from the Sachs approach, the ‘more aid’ stance has generally been the dogma of development over the past decade. Within in recent times, Bill Easterly has challenged this more aid tradition and proposes that until developing countries have well governed institutions and civil organisations, the best donors can do is fund small-scale social entrepreneurs (Easterly 2007). Authors like Dambisa Mayo, with her book *“Dead Aid: Why Aid Is Not Working and How There Is a Better Way for Africa”* have challenged the widely held notion that developing countries cannot emerge from poverty without economic assistance (Mayo 2009). It is against this backdrop that academics and practitioners are beginning to rethink their practice and theory of development. Similarly, this study will focus on the implementation of a development strategy, putting forward the radical notion that development failure may be attributable to failures in organisational change and implentation.

1.2 Local Context

Within the organisational studies literature, there is a widely cited statistic that 70 percent of change initiatives fail (Beer & Nohria 2000). In exploring the reasons for these high failure rates, this dissertation suggests that organisational change may in fact have parallels with failures in development. It is against the backdrop of developmental failure, the author challenges the dominant discourse on organisational change by suggesting a complexity approach.

Throughout this dissertation, the author assesses the extent to which the stories of change practitioners within a developmental context reflect a complexity perspective in understanding organisational reality (Mowles 2010; Tsoukas and Hatch 2001). The complexity approach to

organisational change challenges the dominant discourse by suggesting that change occurs through a complex adaptive process and that planned structured approaches to change are likely to fail (Stacey 2007; 2010).

1.3 Research Context

One of the main goals of this study was to demonstrate that the stories of professionals working in developmental management and a change context reflect a complex adaptive process. The researcher chose to conduct his research in the tiny oil rich nation of Trinidad and Tobago. Trinidad and Tobago an island in the Caribbean has recently embarked on a transformational development strategy called VISION 2020 (MPDTT 2007). The goal of this strategy is to bring the country into developed world status by the year 2020. Since the implementation of this policy, many of the ministries and departments closely associated with government have had to undergo several kinds of organisational change. This context served as the ideal place to conduct research that assessed professional perceptions of change.

1. 4 Scope and Methodology

For the purposes of this study, the author will focus on organisations working under the development pillar – “Developing Innovative People”. The main goal of this study was to demonstrate that stories of professionals working in the change context and developmental management would reflect a complex adaptive process.

The researcher collected stories of change from professionals working in the various arms of the government ministries. It is important to note that at the time of writing this introduction, that there had been a change in the government of Trinidad and Tobago. Despite the threat that the new government may decide to cancel VISION 2020, there is considerable value in a study that analyses how professionals perceive change.

1.5 Research Design

In this study, the author will assess the experience of professionals involved in the implementation of the national change initiative (VISION 2020), through their stories. The initial stages of this study will involve desk-based research that reviews articles, books, reports and academic literature.

From these findings, the author will then design a framework for understanding organisational reality from a complexity informed perspective. The later stages will be followed by semi-structured interviews with key personnel throughout the various ministries who are involved in change.

Using these findings, the author will then critically compare and analyze the findings in relation to the literature presented to test the stated hypotheses. In conclusion, this study hopes to present findings that reflect a need for both theory and practice to adopt a complexity informed perspective.

1.6 Structure

Following on from this introductory chapter, this study will consist of six chapters. The author will first present a brief literature review on developmental management and organisational change. Chapter 3 will outline the methodologies used to obtain the data followed by chapter 4 which will provide an empirical analysis of the findings. Chapter 5 will outline the implications of the findings. While chapter, chapter 6 will provide an overview of the study and its empirical findings.

CHAPTER 2: THEORETICAL FRAMEWORK

2.1 Introduction

Development management entails contradictions, paradoxes and conflicts, not unique to, but inherent in development management. This study seeks to outline the importance of adopting a complexity informed perspective within the field of development management. In reading this dissertation, it is important to note that the author does not follow the path usually pursued within the dominant discourse of development management.

Development is a complex process that is very often implemented by organisations at the public, private and non-governmental levels. Here it is argued that development faces challenges that may be attributable to failures in understanding organisational realities. In the fields of development and organisational studies, little has changed since the original doctrines were set into practice (see Cowen and Shenton 1996, Drucker 2007: 242; Lepore 2009). For example, Drucker (2007: 242) has been quoted as saying, “scientific management is perhaps the most powerful, as well as the most lasting, contribution America has made to Western thought since the Federalist Papers”. This dissertation makes the assumption that most of development is implemented by organisations and consequently focuses on theories of organisations. The author hopes to question some taken for granted assumptions within the field of management, outline a framework for embracing a complexity informed perspective, and finally, to make an associative links between development failure and failures in organisational change. Although the present study is placed within the discourse of development, the arguments made throughout this dissertation should prove to be helpful in understanding other areas of society and management.

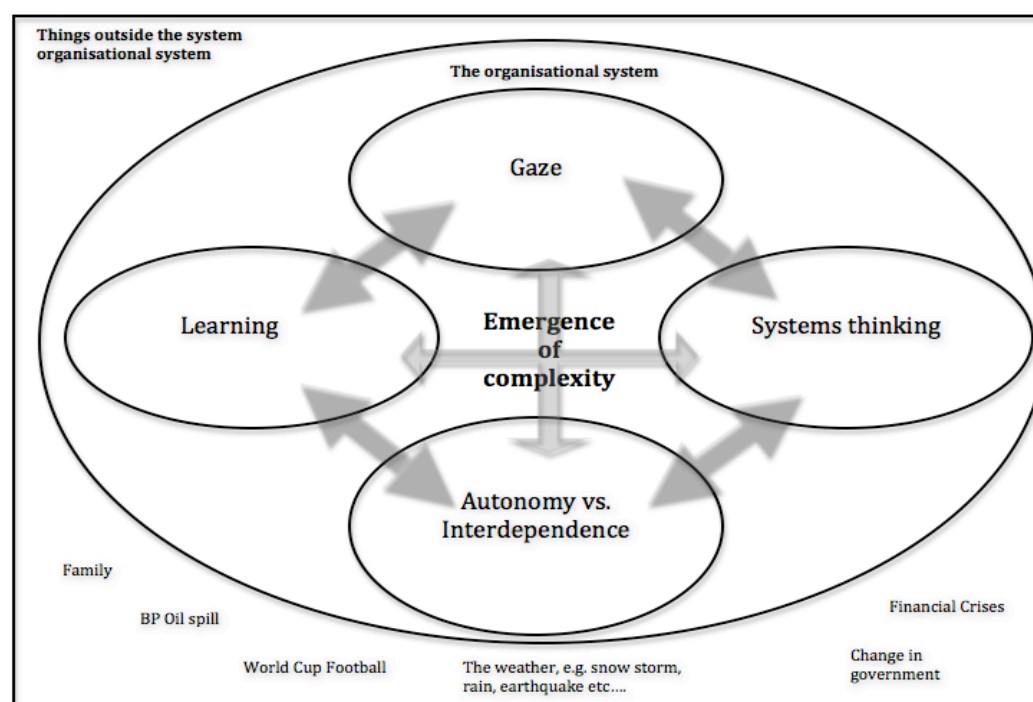
2.2 The Model

Drawing from literature within the field of management, specifically from those of complexity theorists, the following builds a framework for understanding a complexity informed perspective. To develop this framework, the author used a grounded theory approach to identify major themes throughout the management and complexity discourse. It is important to note that the model presented is heavily informed by the work of Burnes (2004), Bound and Garrick (1999), Cummings and Worley (2008), Fowler (2008), Hastings (1993), Harrison (2009), Reid *et al.* (2004), Revans (1980), Senge (1999), Senge *et al.* (2004), Stacey (2007;

2010). Although other authors were used to inform the model presented, readers interested in replicating these themes should be able to do so with the authors provided.

From reviewing the literature, the following four themes seemed to emerge: autonomy vs. interdependence, gaze (standpoint or ideology), systems thinking, and learning. In the following section the author will outline discourse within the four major themes, as a way of presenting a framework for understanding the implications of a complexity informed perspective. The model presented should not be viewed in a prescriptive instrumental manner, but rather as a tool for understanding a complexity informed perspective. Additionally, the word tool is not to be used in the same way that management tools are used to dehumanize aspects of organisational practice, but rather, it is intended to be seen as a tool for increasing the understanding of organisations.

FIGURE 2.1: A COMPLEXITY MODEL FOR UNDERSTAND ORGANISATIONAL REALITY



Source: author

2.3 Gaze, standpoint, mindset and mental models.

“All approaches to the study of society are located within a particular frame of reference of one kind or another” (Burrell and Morgan 1979: 10). That is to say, all research (or management) is generally based on a set of assumptions that reflect a particular perspective. This perspective affects what researchers (or managers) look at i.e. their gaze. Gaze informs

researchers findings, theory and methodology. Burrell and Morgan (1979) suggest, that in the field of social sciences, there are two general kinds of gazes (also called standpoints or mindsets) the ‘subjectivist’ and ‘objectivist’ gaze (see also Bryman 2004; Easterby-Smith *et al.* 2009; Gravey *et al.* 2009).

The objectivist gaze sees the world from a positivist cause and effect perspective, while the subjectivist gaze sees and describe the world from phenomenological, anti-positivist, descriptive frameworks (Burrell and Morgan 1979; Gravey *et al.* 2009). Much of the dominant discourse on organisation studies stems from a positivist cause and effect gaze (see Drucker 2007; Gravey *et al.* 2009; Lepore 2009; Morgan 1997; Nelson 1974; Pugh and Hickson 1996; Stacey 2010; Von Krogh *et al.* 1994).

Von Krogh *et al.* (1994: 53) begin their article on corporate epistemology by asking the reader to try to forget all their previous notions of management. For them, the ‘sense of rightness’, ‘provability’ or ‘one best way’ forward that dominates the business world is an objectivist gaze that is no more. They call for a discarding, altering or reinventing of current management theories, stating, “there is no longer a ‘right knowledge’ but many coexisting conflicting pieces of knowledge (Von Krogh *et al.* 1994: 53)”. They further argue that individuals have their own knowledge; there is no shared knowledge or consensus within the organisation. Management is not a natural science and it is time to rethink the command and control positivist discourse that has been heavily influenced by early organisational theorists like Fredrick Taylor (1967), Henri Fayol (1948), Max Weber and others (see Morgan 1997; Nelson 1974; Pugh and Hickson 1996).

2.3b An anti-positivist descriptive gaze

Part of rethinking the dominant discourse involves taking an anti-positivist gaze. Within the natural sciences cause and effect are seen as being linear, an approach that has been very successful within the natural sciences (Tsoukas and Hatch 2001), but management is not a natural science (Von Krogh *et al.* 1994). Social sciences require a different gaze, one that sees social processes as being non-linear, paradoxical, conflicting and unpredictable (Gravey *et al.* 2009). Under a non-positivist gaze, understanding organisations becomes deeply problematic, since it involves both objective (rational) and subjective (emotive) aspects of human behavior within the workplace (Gravey *et al.* 2009).

Anti-positivists usually ascribe to more descriptive ways of defining meaning. In writing on descriptive modes of understanding meaning, Geertz (1971), argued that social systems are inherently complex and that thick descriptions of terms provided more suitable ways of providing objective systematic exploration of, and interpretation of, terms. Anti-positivist gazes move away from prescriptive definitions toward more descriptive contextual definitions.

This is similar to the way in which authors take different epistemological stances, managers also have different gazes and bring very different perspectives to the table. Unfortunately, the dominant gaze in management is a pragmatic deterministic one, in which “the manager is seeking practical solutions to management issues, in search of the magic bullet that will make his or her business bigger, better, cheaper, faster and more competitive. They would prefer a ‘right’ answer that is simple (Gravey *et al.* 2009: 224).”

2.3c Cause and effect gaze

It is well acknowledged that as humans we try to make sense of our complex world in a sort of interpretive organizing process. Drawing on the work of Emmanuel Kant, Ralph Stacey (2010: 29-50) questions the taken-for-granted assumptions of the individual as a rational autonomous being. In so doing, Stacey identifies two distinct groupings of causalities, causalities of uncertainty and causalities of certainty. Under the causality of certainty grouping, Stacey identifies three notions of causality – efficient, rationalist and formative causality:

1. Efficient causality: cause and effect are straightforward, cause leads to effect in a linear way. Causality takes the if-then structure, if X, then Y.
2. Rationalist causality: goals are chosen using rationality and then achieved by following some rationally chosen strategy. This approach is based on the Kantian idea of if “the action is based on reason then the person is free to make rational choices (Stacey 2010: 33).” That is to say, if a person is to be an autonomous being, then their actions must be freed of actions directed by passion and the laws of nature. For Kant, the laws of nature govern the body, but the law of reason governed the mind.
3. Formative causality is based on causal observations within the natural world. Take a plant for example. The plant, through internal interactions self organizes its parts, the roots, leaves, stems, and flowers. Through these parts the whole plant emerges. In effect “a form of self-organization that reproduces stable forms without any significant

transformation, slight variations emerge in mature states as a result of contextual differences (Stacey 2010: 66). The only things that can emerge from the plant are things that are enfolded within it, stems, flowers, leaves etc... nothing particularly novel can emerge from this type of causality.

Stacey (2010) argues that much of the dominant management discourse is built on the foundations of the preceding types of causalities. He further outlines alternative causalities, which yield uncertain outcomes:

1. Adaptionist causalities: this neo-Darwinian perspectives suggests that during the process of genetic transfer from parent to offspring, new species sometimes evolve as a result of small chance changes within genes. Unlike formative cause, these changes are unpredictable in the sense that genetic mutations often occur. If these new forms provide evolutionary advantage, then the new form of the species will live on to transfer this gene to its off spring. If this new form does not provide evolutionary advantage, it is likely that the new form of species will not live on to transfer its genes to offspring. Through a process of natural selection truly new species emerge in a sort of unpredictable transformative process (see also Dawkins 1976). It is this kind of causalities that Stacey refers to as adaptionist causalities. Some organisational theorists and evolutionary or institutional economist ascribe to this evolutionary tradition (Stacey 2010: 55)
2. Transformative causalities: draws on the work of the Nobel Prize winner Ilya Prigogine and his work on complexity. Prigogine (as cited by Stacey 2010: 56) states that at all levels of the universe are involved in a sort of unknowable, here-and-now, perpetual construction of patterns. For Prigogine, social interaction should be understood “in nonlinear, non equilibrium terms, where instabilities or fluctuations, break symmetries, particularly the symmetry of time so that new order emerges in disorder”. This break in time is particularly important because it brings out the contextual importance within organisational studies (Tsoukas and Hatch 2001). Furthermore, he argues, humans are involved in an interplay of local interactions (self-organisation) or intentional acts that form personal identities, ways of thinking and population-wide patterns (emergence) through the actions of interdependent agents. These interdependent agents through their interplay, form patterns (emergence)

of/within organisations and society. This view is quite paradoxical, in that it suggests, “entities are forming patterns of interactions and at the same time, that they are being formed by these patterns of interactions (Stacey 2010: 57).

2.3d Understanding the gaze of Complexity

Dr. Chris Mowles, professor in complexity and management at the University of Hertfordshire, in responding to an article by Fowler (2008; see also Allen 2000, 2001; Tsoukas and Hatch 2001; Stacey 2007), outlined a simplified account for what he called the three camps of complexity. In the first camp, he argued that these theorists ‘utilise’ complexity in a sort of instrumental manner that can be applied to social phenomenon.

In the second camp, for which he cited theorists like Peter Allen and Peter Hedstrom, Mowles (2010) argues that theorists use complicated computer models to analyze social phenomenon. These theorists offer computer models as way of understanding social phenomenon rather than predicting, controlling or influencing them in anyway. These authors would probably argue that the in order to understand the social world, the reality of social phenomenon should be modeled using the universal language of mathematics.

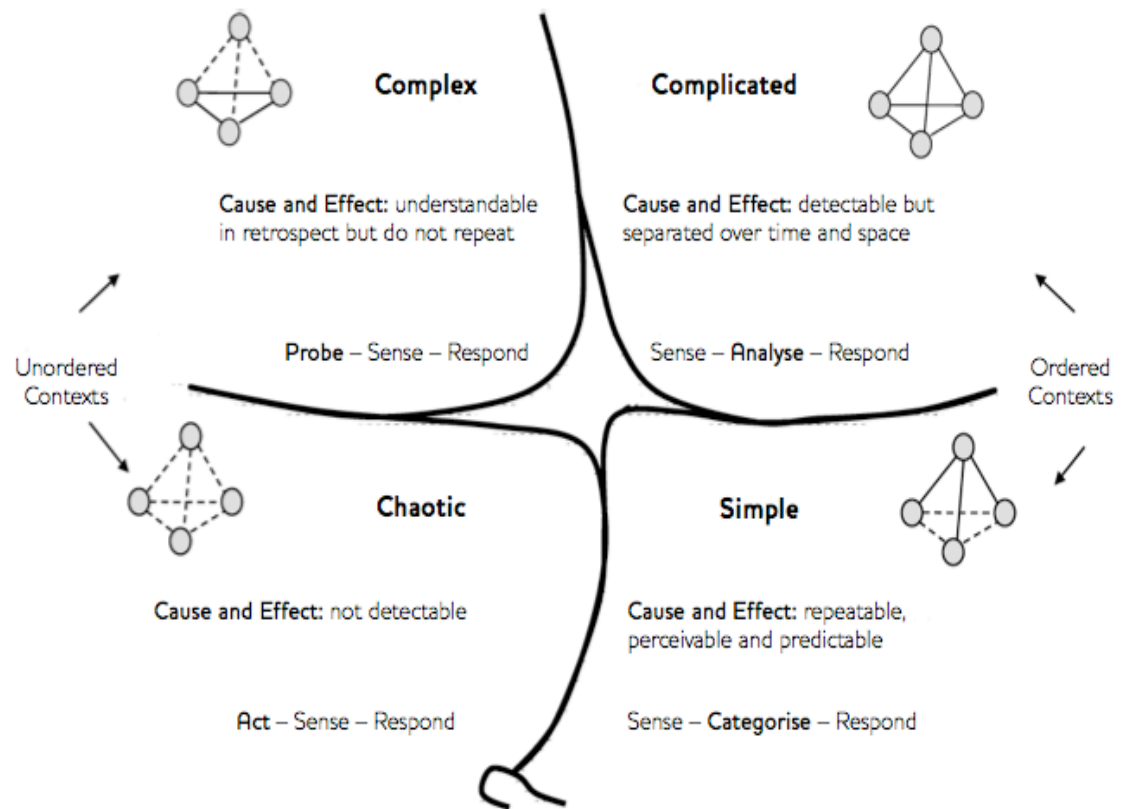
The third camp, for which he cites authors like Ralph Stacey, Robert Chia and Hari Tsoukas, rejects the notion of applying complexity to social phenomenon. These authors understand complexity in interpretive terms. For them social phenomenon emerge through a series of local interactions for which there is no one actor in charge or in control, but rather social phenomenon emerge from an interplay of power relations and multiple interactions between individuals (Fowler 2008; see also Allen 2000, 2001; Shaw 2007; and Stacey 1995; 2007; 2010).

Garvey *et al.* (2009: 131) in writing about coaching and mentoring, also provides a useful analogy highlighting the distinction between complex and complicated phenomena. In their example, they argue that if one were to give a kitten a ball of string to play with, it is likely that the kitten would make a complicated mess, but with enough time, it would be possible to unravel the mess. With complexity however, one would not be able to unravel the mess. Understanding the mess could only entail understanding small, localized parts and as understanding increases additional complexities are revealed. Complexity thus entails that throughout the process of understanding, there are no solutions, but only temporary ‘holding

positions' for which cause and effect is only knowable through hindsight (see Figure 2.2) (Garvey *et al.* 2009: 131).

Lichtenstein (1996 in Higgs and Rowland 2005) suggests that failure in change may be as result of managers not being trained to solve complex problems. Sammut-Bonnici and Wensley (2002) distinguish complicated problems as being rich in details while complicated problems as considered to be rich in structure. Lichtenstein (1996 in Higgs and Rowland 2005) makes the case that learning to solve complicated problems requires a different gaze than learning to solve complex problems. Managers are trained to analyze complicated problems and then solve them in linear sequential ways. Whereas complex problems require a gaze that accepts that there can be no definitive solutions (Lichtenstein 1996 in Higgs and Rowland 2005). Managers can only learn to cope with dilemmas, or maintain temporary 'holding positions' (Garvey *et al.* 2009: 131).

This section has attempted to put forward a case for adjusting ones gaze to include complex anti-positivist approaches to understanding organisations. A gaze informed by the realization that human behavior and mental representations emerge as result of complex social constructions that evolve from rational, emotive local interactions, only serves to inform the observers understanding of organisational reality (Gravey et al. 2009; Mowles 2010; Stacey 2010).

FIGURE 2.2: UNDERSTANDING COMPLEXITY

Source: Fowler 2010: 47

2.4 Autonomy vs. Interdependence

In this section the author will attempt to make a distinction between the notion of autonomy (or empowerment), and interdependence. Many authors writing on organisational change and management refer to empowerment as being central to successful change implementations (see Cummings and Worley 2008; Harrsion 2009; Reid *et al.* 2009; Eldridge and Stafylarakis 2002; Senge 1999; Senior and Flemming 2006).

Take for example observations made by Cross *et al.* 2001: 107 (2004) in their book 'The Hidden Power of Social Networks'. Cross and Parker (2004), point out that the formal organisational hierarchies are not necessarily synonymous with social power within an organisation (see also Cross *et al.* 2001). By comparing the formal organisational structure in Figure 2.3a with the Social Network Analysis in Figure 2.3b, they demonstrate that Cole is clearly the employee with the most social power (Cross *et al.* 2001: 107). This reality often suggests that what you know is determined by whom you know and what you can do is determined by who likes you. Consequently if this particular organisation were to implement a

change strategy, it is likely that they will need to gain the support of the people with the most social power (i.e. Cole) to ensure the success of their change initiative.

This example of social power in social networks demonstrates some of the complexity and diversity that can emerge within human arrangements. This informal system likely emerges through a series of iterated human interactions congruent with the transformative causality perspective (For more on shadow systems see Senior and Flemming 2006: 6; Shaw 2007; Stacey 2007).

Here the author argues, that humans are interdependent agents who can never be purely autonomous. Take the example of Cole, if Cole wished to leave the organisation, she/he may consider the social effect leaving will have on personal connections with people in the organisation. Cole may also consider the effect leaving will have on the organisation. If his or her leaving could potentially make work life hard for her now friends and colleagues, she may feel as though she cannot leave.

Gravey *et al.* (2009: 134), presumably in reference to recent consultancy work, point out that in organisations, it is not that “we are all singing from the same hymn sheet, [but] rather, diversity and complexity are natural and normal in human systems.” Within the dominant discourse of management, the influence of social networks is usually explained under the rhetoric of the ‘shadow-side’ of organisations or informal systems that need to be managed or controlled (Egan 1993; Senior and Flemming 2006: 6; Shaw 2007; Stacey 2007). The following section suggests that social phenomena emerge through the interplay of informal and formal systems and cannot be controlled because these human arrangements take on a life of their own.

FIGURE 2.3: FORMAL VS. THE INFORMAL STRUCTURE

FIGURE 2.3A FORMAL ORGANISATIONAL STRUCTURE: FORMAL NETWORK, FORMAL POWER

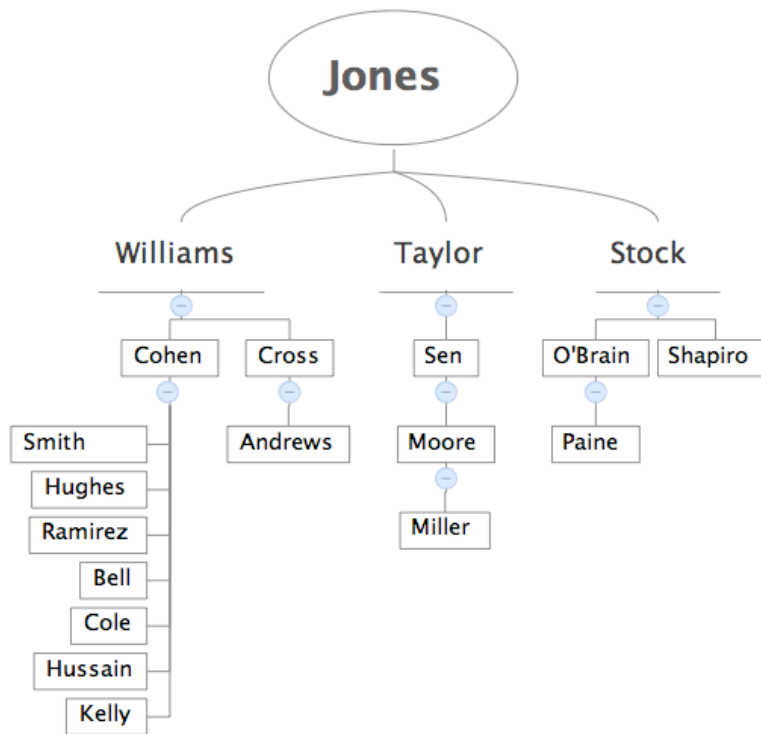
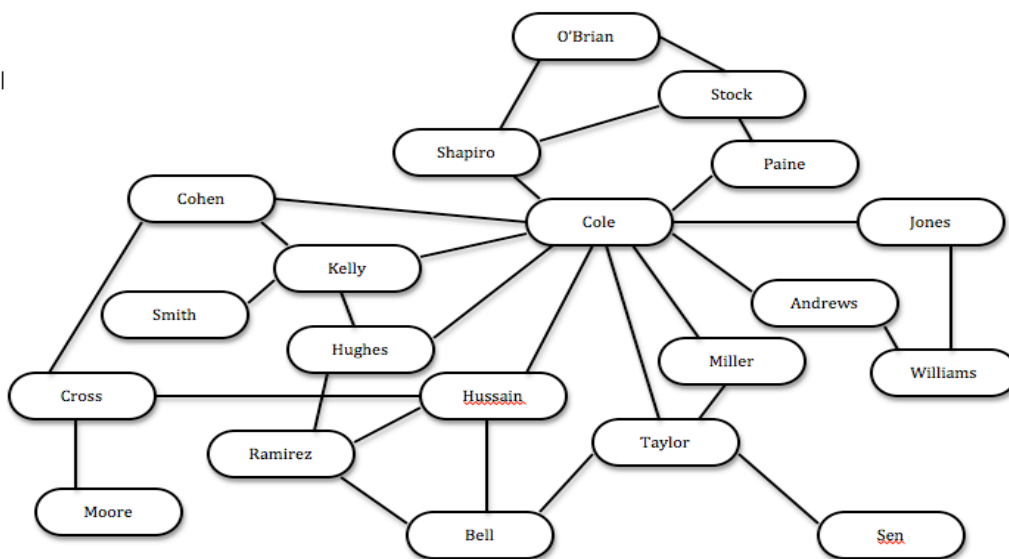


FIGURE 2.3B INFORMAL ORGANISATIONAL STRUCTURE: SOCIAL NETWORK, SOCIAL POWER



Source: Adapted from Cross et al. 2001: 107.

2.4b Emergence

Bruner (1990; 1991) informs us that language and meaning are very much interweaved, and it is individual and societal narratives that construct meaning. Internal narratives, or scripts, inform our gaze, which then influences our behavior, and the ways in which we interpret the world. For Bruner (1990, 1991), social processes are constructed through individual and societal narratives as individuals try to make sense of their world. Human agents, then use the world they have ‘made sense of’ to inform their actions. It is from these local interactions and actions, that behavior, social power and shadow systems begin to emerge. By drawing on the very influential work of Norbert Elias (2010), Ralph Stacey (2000; 2010) argues that human arrangements and social processes emerge in unpredictable, uncontrollable ways from the interplay of power relations and iterated human interactions.

Elias (1982) contends that social life (by extension organisational life) has been shaped by a history of complex sociological and psychological interactions. These interactions he argues have shaped both individual and collective social processes. Elias argues that manners were placed on humans in the form of etiquette and control of bodily functions. He argues that acts such as spitting, urinating, sex and eating, were once considered to be biological drives until it became customary to control them. For him, behaviors first occurred at the individual level and later at the collective level.

Elias further points out how manners evolved, particularly among societies elite. As these manners evolved in elite circles, other circles began to adopt them. The rituals adopted were often influenced by the power and politics. Perhaps the most telling insight from Elias comes from his observation that changes were not planned, but emerged. He argues, that it is through a series of complex unplanned interactions, that humans have been ‘civilized’, so much so that we do not question our social constructs (Elias 1982; Stacey 2010).

Returning to the notion of transformative cause, cause in which “entities are forming patterns of interactions and at the same time, that they are being formed by these patterns of interactions (Stacey 2000; 2010: 57)”. Elias’s notion begins to provide considerable insight into organisational studies. Stacey (2000; 2007; 2010) argues that humans are part of a complex adaptive system in which, a “local interactions is technically called self-organisation, and it is this, which produces emergent coherence in patterns of interaction across the whole population of agents.” Stacey (2000; 2007; 2010) warns against equating self-organisation

with free-for-all notions or notions of empowerment. He argues that human agents through social processes, similar to the ones present in the discussion of Elias, both constrain and enable human behavior.

Human agents are not ‘free to do’ as they like, else they are in fact risking being ostracized from social groups. This is what power means for Stacey, it entails social control and order within a complex adaptive system which takes on a life of its own (Stacey 2007; 2010). That is to say humans are free to make choices, but those choices are both constrained and enabled by social interactions. A point explored in section 2.5 in relation to people gaming the ‘system’. p

The preceding section outlined an argument for why humans can never be purely ‘empowered’. Human agents are always connected to other human agents through social processes, which limit our freedom to make choices. This interdependence frames choice in a way that will always involve the actor considering a series of complex interactions. The author takes this further by arguing that an employee is only as empowered or autonomous as her/his jobholder allows. Consequently the writers within the dominant discourse may need to reconsider notions and models of empowerment since human agents, are never purely ‘empowered’, but always interdependent (see Harrision 2009; Reid *et al.* 2009; Eldridge and Stafylarakis 2002; Senge 1999; Senior and Flemming 2006).

2.5 Systems thinking

Space here does not allow for a deep discussion on the evolution of epistemological justifications for systems thinking. Instead the author will identify a few key points in understanding systems thinking from a complexity informed perspective as presented by Stacey. It is important to note that the author is not completely rejecting the notion of systems thinking but challenging current perspectives (Stacey 2007: 35; 2010: 119 see also Flood 1990 for detailed outlines of the evolution of systems thinking).

Systems theory usually describes organisations as being “a set of interdependent parts that form a whole (Cummings and Worley 2008: 676)”. Stacey (2007) argues that in general, there are three ways of understanding systems theory: General systems theory, Cybernetic systems and Systems dynamics. General systems theorists argue that systems have strong tendencies toward stability or adapted equilibrium. For these theorists, systems maintain their stability only if they are open to interactions with other systems through permeable boundaries (Stacey

2007: 35). Cybernetic systems theorists, for whom he cites authors like William Ross Ashby, Antony Beer and Nobert Wiener, argue that systems are self-regulating, goal directed arrangements that adapt to their environments. They use examples like self-regulating heating systems, which detect the temperature outside the system and adjust to fill the temperature gap.

Finally, systems dynamics theorists move away from other strands in systems theory by suggesting that systems are not necessarily self-regulating but may be self-sustaining or self-destructive (Stacey 2007). Stacey (2007: 36) points out that it was engineers seeking to address management problems who developed both cybernetic and systems dynamics theories, implying that they take a positivist gaze.

These theories have influenced management in two ways, the first suggests that organisations are goal-seeking systems and it is these goals that drive their actions. The second view is the popular notion that organisations are sub systems of supra systems. These theorists argue that the equilibrium of these sub systems is maintained by the environment in which they are entailed (Stacey 2007; 2008).

To further understand systems thinking we must return to the Kantian notions of formative and transformative causality. The problem with all these systems theories is that they all use efficient and formative causality to explain transformative processes (Stacey 2007; 2010). As presented earlier, efficient causality refers to if-then statements, while formative causality refers to the notion of cause that unfolds from what is already enfolded within the entity. Alternatively, transformative causality refers to causality in which the interaction of local entities forms wider patterns, while simultaneously forming the entity itself. It is important to note that of these causalities, only transformative causality is able to explain novelty and creativity (Stacey 2010). If one were to agree with these propositions, then it would imply that systems thinking is insufficient as it fails to account for transformative causalities.

2.5b Constitutive idea versus a Regulative idea

Another Kantian notion worth mention refers to Kant's distinction between a constitutive idea and a regulative idea. If one were to present an organisations as actually achieving some goal, objective or purpose, then this would be a constitutive idea. What is really happening is that one is presenting an idea, or hypothesis, as if it were reality. Conversely, if one were to be

“thinking of a system ‘as if’ it were a system operating ‘as if’ it had a purpose” then this would be regulative idea (Stacey 2007: 30). Kant thought that we could only observe the appearance of reality, and although he was not a pure relativist, he did uphold a ‘both and’ perspective that knowledge was both real and reliable but knowledge of reality was impossible (Stacey 2007). This distinction is important since it suggests that more theorists and practitioners need to begin to adopt regulatory ways of understanding organisations.

2.5c Bounded states of stability or instability

Before moving on, it is also important to point out another problem with the dominant discourse of systems theory. System theories automatically place organisations within a bounded state of stability or instability (Stacey 1985). This bounded state implies that things outside this boundary do not affect processes within the boundary. Furthermore popular systems theorists, in particular Peter Senge (1992; 1999), often speak of systems thinking as the means through which managers are able to step out or step over the boundary of the system. In so doing, managers are then capable of ‘seeing the whole’ so that they can now enact change by indentifying ‘leverage points’ (Senge 1999).

This rationalist approach refers to one’s gaze or intention, which very often affects strategy. Stacey (2010) refers to this as ‘people gaming the system’. Stacey uses the example of recent the financial crises to illustrate how individuals game the ‘system’. Individuals within the banking sector made local decisions that affected the whole in very unpredictable ways. These decisions benefitted the individuals, but greatly affected people both within and outside of the banking sector, ‘the system’, in very unpredictable ways (Stacey 2010). People within social arrangements are not autonomous rational, rule following robots. They make decisions based on a range of complex interactions both within and external to the system (Stacey 2010).

Earlier in this paper the author noted that the more one understands a part of ‘the whole’, the more complexity one observes (Gravey *et al.* 2009). The proposition of stepping out to observe ‘the whole’ ignores the complexity perspective and assumes it is possible to see the whole. It assumes an a-priori, reductionist understandings of cause and effect. Since social arrangements emerge from local interactions, one-person cannot ‘see the whole’, nor can they control or enact change. Change instead emerges through a complex adaptive process (Stacey 2010). If one were to accept this thinking, then it would be impossible to step back and identify Senge’s (1999) leverage points in order to enact change. These observations do not

make systems thinking invaluable, but rather, the author is suggesting a possible rethinking of the way we understand systems.

2.6 Learning

Understanding learning as being a complex adaptive process, frames ones approach to learning within an organisation. Here the author argues that change implies learning and that learning needs occur through conversations and local interactions. This section of the literature review is intended to be informed by the preceding sections.

If one accepts that gaze influences outcome, then an approach to organisational learning that includes a complexity informed perspective would be very different from a non-complexity informed perspective. Mowles (2010) argues that Development management has uncritically adopted practices from private sector management, and consequently ignores the unique features of non-private sector organisations. McCourt (2008) argues that within a context of democratizing independent nation states, there is a need to return to understanding institutions and politics at local levels versus ascriptions to universally prescriptive models like New Public Management (McCourt 2008). For Mowles (2010) development management is particularly prone to a future determined by the interweaving of many interactions. This dissertation has presented a view of organisations as emerging from the “ongoing local interactions of an ordinary kind in which population wide patterns of organizing emerge (Stacey 2010: 123)”. This dissertation rejects using a view that frames the understanding of organisations within a discourse that frames organisations as comprising of people as agents or as a system made up of human parts (Stacey 2010: 123).

Current perspectives on learning focus on linearity, technique and competency based models (Gravey *et al.* 2009: 97; Harrison 2009; Reid *et al.* 2004). Although many authors within the dominant discourse of learning describe learning as being non-linear, complicated, contradicting, and paradoxical (see Bound and Garrick 1999, Harrison 2009; Revans 1980). The dominant discourse and ‘hegemony of technique’ does not allow for open-ended learning and tends to adopt linear approaches (Gravey *et al.* 2009). These linear approaches to learning should not prohibit emphasis on process and relational aspects of learning, but should instead enable people to “learn by, from and with one another (Gravey *et al.* 2009: 98)”. An approach that is congruent with the local interactions (or iterated human interactions) perspective.

Erickson (1995) proposed the notion of ‘generativity’ within social interaction. For Erickson, human social systems can avoid stagnation through interaction and dialogue that develops both ourselves and others (Erickson 1995). Erikson’s approach to social learning is conducive to, the ‘ongoing local interactions’ and transformative causality approach presented earlier in this dissertation.

These observations place language, conversation and narrative discourse at the heart of understanding the reality of organisational learning. As Shaw (1997) argues, these observations imply that, if one wishes to understand the reality of an organisation, or change, one must change local interactions by changing conversations. Literature on coaching, mentoring and counseling offers a rich source of information on how one would approach such a task (see Clutterbuck and Megginson 2005a, 2005b; Gravey *et al.* 2009; Lave and Wenger 1991).

2.7 Implications for Human Resource Management.

Within in the dominant discourse, there is a move towards more organisations becoming ‘learning organisations’, “a form of organization that enables the learning of its members in such a way that it creates positively valued outcomes, such as innovation, efficiency, better alignment with the environment and competitive advantage (Huysman 1999 as cited in Armstrong and Foley 2003: 74)”. Armstrong and Foley (2003: 74) make the crucial distinction between the “means” (organisational learning) and “ends” (learning organisations) of learning.

Solomon (1999) and Garrick (1999) point out that society endorses a normative culture of individualism, rationality and positivism. This endorsement, they argue, is contradictory to learning alliances, which encourage employees to adopt ways of working that foster openness, trust, collaborative working, flexibility, innovation, creativity and improvisation within workplaces.

Other authors have demonstrated concerns relating to change, learning and learning organisations. For example, Schein (1999) noted the potential for all learning to be defined as what he called ‘coercive persuasion’. That is to say, if learning and training initiatives do not offer easy options for exit, then they can be defined as being collusion. Solmon (1999) highlighted that competency based training and management philosophies, which promote

sameness, have the potential for assimilation effects. These assimilation effects **can** be detrimental to innovation and creativity within organisations.

Many authors writing on workplace learning prescribe different version of what they all believe the future of organisations ‘should’ look like (Garvin 1993, 2008; Hastings 1993; Senge 1999; Senge *et al.* 2004; Ulrich 1993). For example, Garvin (1993; 2008), Senge (1999) and Ulrich (1993) all provide prescribed version of what they term learning organisations. They all ignore the emergent nature of social phenomenon within organisations, which suggests that social arrangements emerge in unpredictable self-organized ways (Stacey 2007). Although Stacey (2007; 2010) would likely argue that it is impossible for any one person to influence change, Shaw (2007) argues that processes like coaching, and concepts like learning conversations have the potential to change how we approach organisational change.

2.8 Concluding comments

In this dissertation, the author has presented an alternative way of understanding organisations and management. This model presented was built on four components, gaze, interdependence, systems thinking and learning. These four themes were not intended to be separate themes, but were meant to demonstrate that all four themes interact with each other in very complex interrelated ways. Here the author is not advocating for purely anti-positivist approaches to management, but rather an approach that values both positivist and anti-positivist complex perspectives. Currently, the dominant discourse leans more heavily towards the positivist side of the debate.

Popular Human Resource Development texts like Reid *et al.* (2004) and Harrison (2009) still focus very heavily on quality, accountability, control, systematic and systemic thinking. Both Harrison (2009: 132) and Reid *et al.* (2004: 123) suggest briefly that practitioners should try to embrace processes of loose control. Neither texts places much emphasis on the nature of local interactions. Both authors seem to operate from the framework that Schein (1989) called the ‘divine right’ of managers to ‘wield authority’ and direction at workers. The dominant discourse of management suggests that leaders decide the organisations direction and then implement strategies to achieve these objectives (Stacey 2007; 2010). This way of thinking has been inherited from scientific management, which stipulated the normative culture of compliance and obedience currently upheld within management literature (Gravey *et al* 2009 chapters 6, 7 and 8). There will always be pragmatic reason for positivist procedures that

measure performance, results, outcomes etc... What this dissertation has argued for is the adoption of complexity informed perspectives that can provide more insightful interpretations of organisational theory, reality, practice and procedures.

The preceding literature review hoped to set a framework, which demonstrated a need for organisational studies to move away from traditional objectivists standpoints towards more subjectivist approaches to understanding organisations. In moving toward more subjectivist ways of thinking about organisations, the presented framework suggests understanding organisations from anti-positivist, phenomenological, standpoints, which embrace the complex reality of organisations (Stacey 2010).

CHAPTER 3: METHODOLOGY

3.1 Introduction

From the above, it is clear that a complexity informed perspective places a new gaze on the dominant discourse of development management (Higgs and Rowland 2005; Mowles 2010; Shaw 1997; Stacey 1995; 2007; 2010). The model presented is highly theoretical and abstract, drawing considerably from the insights of philosophers like Kant and Bruner. It is evident that if the notions presented above are to be considered, then more empirical evidence is needed. The ensuing chapter on methodologies will first outline the hypotheses and aims of the study, while the following section is intended to justify the chosen research design by building on the presented framework.

3.2 Hypothesis

This study seeks to determine, how change practitioners perceive the reality of change. The following hypothesis are proposed:

- 1) Practitioner's (or professionals) change stories reflect a complex adaptive process?
- 2) Practitioner's (or professionals) change stories reflect the notions of emergence and local interaction as presented in the current literature review.
- 3) Practitioner's (or professionals) change stories reflect notions of system thinking as presented in the current literature review.
- 4) Practitioner's (or professionals) change stories reflect notions of autonomy versus interdependence as presented in the current literature review.

Practitioner's (or professionals) change stories reflect notions of complexity gaze as presented in the current literature review.

3.3 Aims & Objectives

The main objectives of this study are as follows:

- 1) To provide a critical literature review of literature on organisational studies and its lack of emphasis on ambiguous complex organisational realities.
- 2) To demonstrate that stories of professionals working in developmental management and a change context reflect a complex adaptive process.
- 3) To establish a potential framework that embraces anti-positivist approaches to understanding developmental management and organisational change.
- 4) To demonstrate potential associative links between development failures and the failure of organisational studies to embrace uncertainty.

In choosing an appropriate methodology, this section outlines various approaches to research and provides rationale of the research methodology chosen in the current study.

3.4 Positivism vs. social construction

Within the field of social science research there are two main philosophical or meta-theoretical traditions; positivism and social constructionism (Bryman 2004, Burrell and Morgan 1979, Easterby-Smith *et al.* 2009). In general, positivists advocate for objective methods of research that reflect the external reality, of the world out there (Burrell and Morgan 1979, Easterby-Smith *et al.* 2009). While, social constructionists argue, “that ‘reality’ is not objective and exterior, but is socially constructed and given meaning by people (Easterby-Smith *et al.* 2009: 58).”

For social constructionists ‘reality’ is determined by how people interpret their shared experiences rather than objective external factors (Burrell and Morgan 1979, Easterby-Smith *et al.* 2009). This distinction is similar to the objectivist versus the subjectivist gaze presented in the previous section. Consequently, given that we have two very contrasting methods of research, we must establish a way of conducting research within the social constructionist, the positivist philosophical approach or both.

3.5 Quantitative and qualitative approaches to research

Within management and social research, it is often believed that good research involves both quantitative and qualitative analysis, a research strategy that is often referred to as triangulation (Bryman 2004, Easterby-Smith *et al.* 2009, Moran-Ellis *et al.* 2006, White 2002). The different meta-theoretical lenses previously referred to as positivism and social constructivism, are usually in reference to quantitative and qualitative approaches to research (Bryman 2004, Easterby-Smith *et al.* 2009, Moran-Ellis *et al.* 2006). Quantitative research usually falls under the philosophical tradition of positivism and usually entails the collection of measurable data demonstrating a relationship between theory and research, as being a deductive objective conception of social reality (Bryman 2004, Easterby-Smith *et al.* 2009).

Conversely, qualitative analysis usually refers to anti-positivistic approaches to demonstrating a relationship between theory and research, and emphasizes an inductive approach to understanding the social world. Qualitative research methods often use interpretivist methods that focus on the outcomes of interactions between individuals (Bryman 2004, Burrell and Morgan 1979, Easterby-Smith 2009, Moran-Ellis *et al.* 2006).

3.6 Mixing qualitative and quantitative research methods.

Using different methods of research provides researchers with an opportunity to understand the phenomenon under examination from different philosophical standpoints. Moran-Ellis *et al.* (2006: 46) define mixed-methods “as the use of two or more methods that draw on different meta-theoretical assumptions”. Although various authors refer to mixing methods differently, for example, mixed-methods (Tashakkori and Teddlie, 1998), mixed-methodology (Tashakkori and Teddlie, 1998), multi-strategy or multi-methods (Bryman 2006), they all refer to the use of different methodologies to understand the social world. Mixed methodologies offer a framework from which researchers can begin to understand the interaction effects, synergy and/or “influences on performance that occur together” within complex social situations (Easterby-Smith *et al.* 2009: 271).

Researchers often use an analogy from geometry to justify using mixed research methodologies. They claim that a person drawing a map is more likely to have an accurate representation of the terrain if he or she takes multiple measurements (Bryman 2006,

Easterby-Smith 2009, Moran-Ellis *et al.* 2006). Similarly, the researcher is also likely to achieve more accurate findings if they use multiple measurements (Moran-Ellis *et al.* 2006).

Although there is considerable debate around the appropriateness of using a multi-strategy versus single strategy approaches in research design and practice (see Greene *et al.* 1989; Moran-Ellis *et al.* 2006: 46; Nash 2002; Sale *et al.* 2002), this study uses a single strategy qualitative approach to understanding the phenomenon under question.

One of the claims against mixing quantitative and qualitative research methods is that, the two are distinctly rooted in irreconcilable ontological and epistemological commitments and by mixing the two methodologies it is difficult to maintain their fixed epistemological and ontological implications (Bryman 2006; Smith 1983).

The second main argument, although similar to the previous argument, views the two methods as paradigms in which the two epistemological assumptions, values, and methods are inextricably interweaved making them incompatible between paradigms (Morgan 1998).

Furthermore, given that one of the main hypotheses of the current study is that cause and effect are not always easy to measure, and that cause and effect often interact (or are interdependent) with one another (Easterby-Smith *et al.* 2009). The level of measurable data that is demanded of positivist methodologies is likely to be inappropriate for the current study.

Since, qualitative research can be understood as the means by which researchers obtain findings within in the philosophical tradition of social constructionism, while quantitative research provides the means by which researchers attain positivist findings. The researcher has chosen to use a qualitative approach for this study, a methodology congruent with the presented framework.

During the literature review, the author argued that management needs to adopt more anti-positivist approaches to understanding organisations. Both Higgs and Rowland (2010), and Weick (1995) argue that the nature of the phenomenon being explored in this study, lends itself to descriptive approaches to research such as narratives and stories. Consequently the current study adopts anti-positivist methodologies to explore the proposed hypotheses.

3.7 Research Design and Rationale

The major dilemma for complexity researchers, is that research is usually perceived as an exploration of an ‘objective reality’, a notion that complexity theorists oppose (Alvesson and Skoldberg 2009; Bryman 2004, Burrell and Morgan 1979, Easterby-Smith *et al.* 2009; Tsoukas and Hatch 2001). Drawing from Kant and Bruners observations, the author would argue that an organisation is a non-tangible abstract concept that is conceived in the minds of individuals and groups. This perception raises the question of what kind of research is appropriate for understanding subjective and inter-subjective experiential worlds?

Similar to Higgs and Rowland (2010), Alvesson and Skoldberg (2009) propose what they term reflexive methodology, an interpretive process in which both the participant and researcher work together to interpret the ‘data’. This method is thought to produce research that is non-reductionist and highly reflexive. Reflexive methodology demands considerable time and effort from participants and the researcher. It is important to note, that the pure complexity theorist, is likely to view qualitative research as research that aspires to be quantitative. Due to the time constraints involved in undertaking an MSc, this study will use a qualitative approach, which focuses on the stories of participants. This compromise is informed by the work of Higgs and Rowland (2010), who take advantage of an interpretive qualitative methodology for gathering data, (See also Tsoukas and Hatch 2001).

Weick (1995), Higgs and Rowland (2010) and Alvesson and Skoldberg (2009) all argue that participants telling stories about change are appropriate for collecting the non-objective, subjective and inter-subjective data that reflect the reality of an organisation within a complexity framework.

In understanding a complexity informed perspective, the author speculated that if organisational reality does emerge through a complex adaptive process as suggested by Stacey (2010), then practitioners (or professional) implementing change should have either tacit or explicit knowledge that reflect organisational reality as having emerged through a complex adaptive process. This knowledge should be revealed in informants’ change stories. Higgs and Rowland (2010) argued that for cases in which authors are presenting theoretical frameworks where existing knowledge is limited, then using a case study approach that analyzes the stories of professionals or practitioners would be an appropriate way forward in revealing themes of complexity.

Furthermore, in designing a study similar to the one currently presented, Higgs and Rowland (2010: 129) argue, “that unless academics combine methodological rigour and practical relevance then the academic practitioner polarization in management research will harden. Although they argue that researchers need to move away from models in which the researcher interprets the data. This study tries to bridge the gap between academic rigour and practical relevance by limiting the researchers interpretation of the data and engaging in research that focuses on the lived experience and perception of informants.

3.8 Literature Review

Both quantitative and qualitative research is defined as demonstrating a relationship between theory and research (Burrell and Morgan 1979, Easterby-Smith *et al.* 2009). A good literature review should provide the link between theory and research. Webster and Watson (2002) in writing on information systems, describe a literature review as being the foundation of research. For them, a good literature review should not be an exhaustive list of citations, but a coherent construction of the topic. Furthermore, Easterby-Smith *et al.* (2009: 30) describe a good literature review as being one that provides “a novel synthesis of existing work, which may lead to new ways of looking at a subject or identify gaps in the literature.” For Easterby-Smith *et al.* (2009) researchers should not present literature in an accepted way, but in a critically reflective manner that challenges their own, and others work. Good research should contribute to knowledge within the field, such an approach to literature reviews helps to place the research back into literature by contributing to new knowledge within a chosen topic area (Mauch and Birch 1983)

Here the author will attempt to build on, and contribute to knowledge, the current literature review will attempt to synthesize previous literature on organisational change by drawing on academic literature presented mainly in books and journal articles to develop a framework for complexity thinking. The author used a grounded methodology approach to develop a framework for understanding a complexity informed perspective. It is important to note that in analyzing the data, the author used a combination of analytic induction and content analysis methodologies to explore the validity of the framework presented.

3.9 Semi-structured interviews: a narrative approach

As outlined earlier in this study, the main research questions of this study are concerned with subjective and inter-subjective phenomenon. As a result, the author has chosen to only use qualitative data to explore the research questions. In conducting similar research, Tsoukas and Hatch (2001), in drawing on Bruner's (1986) distinction between "logico-scientific" and 'narrative' modes, point out two modes of thought that are complementary, but irreducible to one another.

Bruner (1986) noted that the proposition 'if x then y' (logico-scientific) implies causality in search of universal truths, while the proposition 'The king died and the queen died' is a proposition that searches for "likely particular connections between two events – mortal grief, suicide, foul play (Bruner 1986: 11)." The first approach assumes an objective reality, while the second approach grants access into subjective and inter-subjective realities. This second approach, the narrative form, refers to what Tsoukas and Hatch (2001: 981) call second order complexity. Second order complexity "employ[s] interpretive methods and are more likely to view the objectivity of the world as a social construction". Like Alvesson and Skoldberg (2009), Tsoukas and Hatch argue that the reality of organisations is more likely to be revealed in story form, since stories have the potential to provide researchers access to second order complexity of the form 'If the king died and the queen died' – then why? (see Higgs and Rowland 2010; Stacey 2010).

Furthermore Bruners (1990; 1991) notion that meaning is formed through conversation, stories, metaphors and symbols supports understanding organisational reality through stories and narrative (Higgs and Rowland 2010; Shaw 2007). Stories have the potential to capture the subjective and intersubjective experiential worlds of employees implementing change.

For the purposes of this study, the author used semi-structured interviews to attain qualitative data in the form of stories. Semi-structured interviews are considered to be acceptable methods of attaining data when a researcher wishes to discover the views, opinions and perceptions of individuals and groups (Easterby-Smith *et al.* 2009). Two of the major downfalls of interviews are that they are time consuming and conversations may not help the researcher attain a clear picture of the interviewee's perceptions (Easterby-Smith *et al.* 2009). Consequently, some structure was needed for the current study.

The first two informants were asked the following questions:

1. How do you feel about change within your organisation?
2. Tell me, the researcher, a story about change in your organisation

After conducting these interviews the researcher felt that he was not getting think rich data and switched his interviewing technique. Cluttbuck and Megginson (2005: 6) in their book *Techniques for Coaching and Mentoring*, suggest what they call a conversation ladder. The researcher asked informants to tell him stories about change within their organisation that were significant, successful, difficult, interesting and finally what are their dreams and aspirations for change within their organisation? Admittedly this final question was designed to help with the snowballing methodology, but this question did prove to provide useful insights during the interviews.

3.10 Research Context

In response to public demands to reduce crime rates, improve the education of citizens, reduce poverty, improve technological access, improve infrastructure, and solve the ever impeding threat of oil supplies being depleted. The tiny oil rich nation of Trinidad and Tobago just off the coast of Venezuela, has embarked public participatory approach to their development which they have branded as VISION 2020.

VISION 2020 was designed to help the country achieve first world status by the year 2020 (MPDPTT 2007). The plan contains five pillars: Developing Innovative People; Nurturing a Caring Society; Enabling Competitive Business; Investing in Sound Infrastructure and Environment; and Promoting Effective Governance (MPDPTT 2007).

The author speculated that the stories of change practitioners operating in development at the national and international level should demonstrate more themes of complexity since the nature of their work involves more interactions.

Although each pillar contains a specific mandate, VISION 2020 proposes to transform the country by the year 2020 (MDPTT 2007). Having implemented this policy, many of the ministries, educational institutions and private sector organisations have had to undergo considerable organisational change in order to meet the goals of VISION 2020. It is under this rhetoric, that the author has chosen to interview professionals working under the pillar of

“Developing innovative people”. It is hoped that the stories of professionals working under such change conditions, will provide valuable data for determining if there is any merit to a complexity informed perspective.

The rationale for choosing professional’s working on this national change strategy, stems from the hypothesis that professional’s working within a change context are likely to hold valuable insights about the reality of change. It is hoped that professional’s articulating their perceptions of lived experiences will reveal themes, patterns, and categories that either confirm or disconfirm the stated hypotheses.

3.11 Sample

The researcher began by writing letters to the various ministries requesting permission to interview employees working on various aspects of change. Having not received any responses, the author phoned a few ministries and simply asked around for people who were working on VISION 2020 and would be appropriate to interview. Eventually the researcher was able to setup a meeting with the director of the Ministry of Planning of Trinidad and Tobago. At the end of the interview the researcher asked her to recommend other people who she thought would be suitable for interviewing. The only criteria being that informants needed to be heavily involved in organisational change.

Interviews were conducted with informants in The Ministry of Planning of Trinidad and Tobago, The Ministry of People and Social Development of Trinidad and Tobago, The Ministry of Science, Technology and Tertiary Education of Trinidad and Tobago, The Ministry of National Security of Trinidad and Tobago’s Citizens Security Program and The College of Science, Technology & Applied Arts of Trinidad & Tobago. Table 3.1 represents the number of informants that were interviewed within each organisation (see Appendix 1 for more details on interviews).

All interviews were recorded on a 160GB Ipod with using a Mini Microphone for iPhone 3G/iPod/touch/classic bought on amazon.co.uk. Interviews were then transferred onto a MacBook using iTunes music software. All recordings were labeled with the name of the informant the date and time. Interviews were then listened to and transcribed for content analysis. All informants held positions as either program coordinators, program officers, implementing officers, directors, change facilitators or permanent secretaries (the name for the

Chief Executive Officers within the public sector). All informants held positions in which they were heavily involved in change. Nine interviews were conducted with an average of thirty-five minutes. Interviews ranged from fifteen minutes to one hour and thirteen minutes.

Of the nine interviews conducted, the researcher identified thirty-eight discrete stories. Each informant provided an average of 4.2 stories per interview. These stories were then analyzed for themes of complexity.

TABLE 3.1 NUMBER OF INTERVIEWS SEPARATED BY MINISTRY

Organisation informant worked	The number of informants interviewed from a particular organisation
The Ministry of Planning of Trinidad and Tobago	1
The Ministry of People and Social Development of Trinidad and Tobago	2
The Ministry of Science, Technology and Tertiary Education of Trinidad and Tobago	2
The Ministry of National Security of Trinidad and Tobago's Citizens Security Program	1
The College of Science, Technology & Applied Arts of Trinidad & Tobago.	3
Total	9

Source: author

3.12 Concluding comments

The preceding methodology section has outlined the hypotheses, aims and objectives of this study. Given that most complexity theorists argue against using quantitative data, or qualitative data that strives to be quantitative (Alvesson and Skoldberg 2009; Tsoukas and Hatch 2001), the author has attempted to provide detailed justification for the chosen methodology. The following section will explain the findings of this study after having applied the chosen methodology.

CHAPTER 4: EVALUATION OF FINDINGS

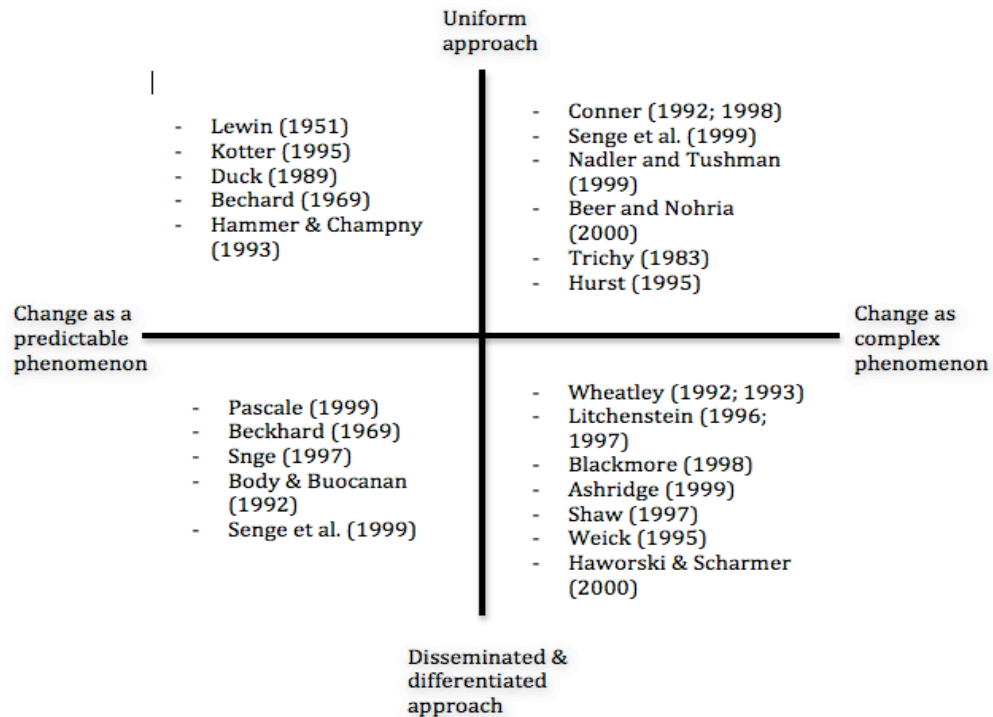
4.1 Introduction

The following section provides a detailed evaluation of the findings for this study. The first section of this chapter evaluates informant's stories to determine the extent to which stories reflect the theme of complexity. The following section further draws on models presented in the literature review to assist in evaluating the merit of the chosen study. The researcher uses quotes from stories collected during interviews to give perspective on the implications of a complexity informed perspective. Here the author uses a combination of content analysis, inductive analysis methodology to assess the findings.

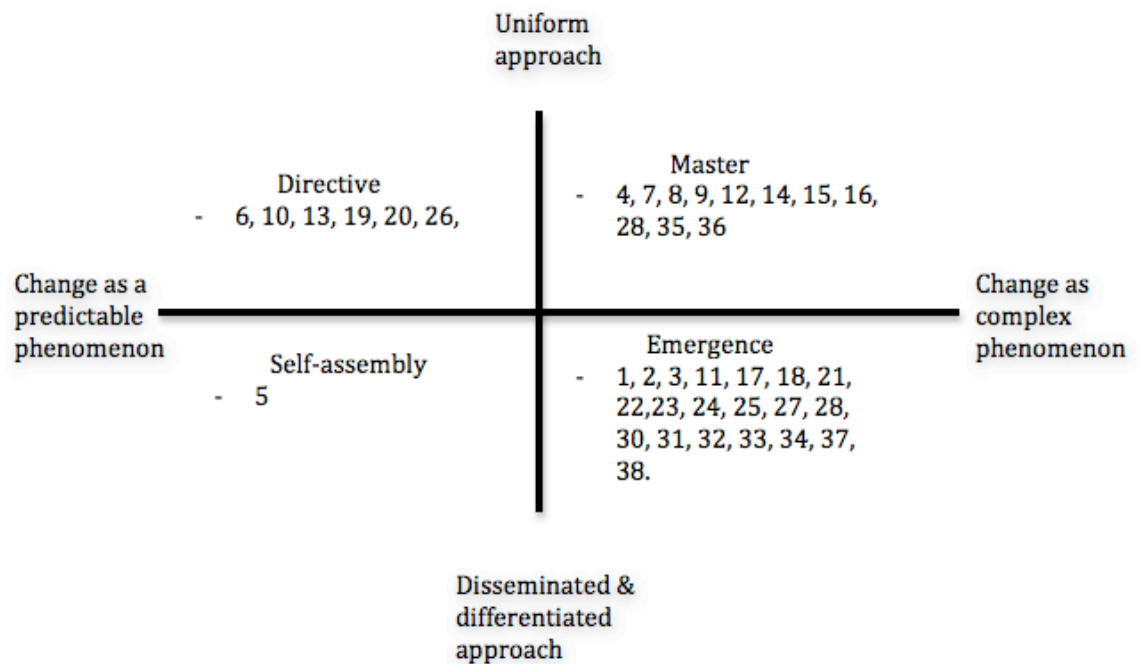
4.2 Categorizing the change stories

The findings of this study did not reflect all the themes outlined by the researcher, but informant's stories did reflect a complex adaptive process. Higgs and Rowland (2010) in exploring approaches to change and leadership, provide a map on literature of change as outlined in Figure 4.1. In their map, they suggest that change literature usually falls into one of four categories. Where the literature falls on the matrix is determined by where the fall on the two axis's of change, predictable phenomenon versus change as complex phenomenon and a uniformed approach to change versus a disseminated differentiated approach to change (see Figure 4.1). The model presented in the literature review falls into the emergence section of the Higgs and Rowland (2010) matrix, the bottom right.

Of the thirty-eight stories indentified in the study, the author categorized each story according his interpretation of the story and where it fell on the axis's presented by Higgs and Rowland (2010). Figure 4.2, revealed that of the thirty-eight stories thirty-one stories revealed complex phenomenon versus seven that reflected predictable phenomenon. Seventeen change stories revealed a uniformed approach while twenty-one stories revealed a disseminated and differentiated approach (see Table 4.2). These findings suggest that the majority of the stories revealed complex phenomenon, eight-one percent, whilst only fifty-five percent of the stories revealed disseminated differentiated approaches to change. A characteristic that is likely due to the bureaucratic nature of educational and public sector organisations.

FIGURE 4.1 : MAP OF ORGANISATIONAL CHANGE LITERATURE

source: Higgs and Rowland 2010: 126

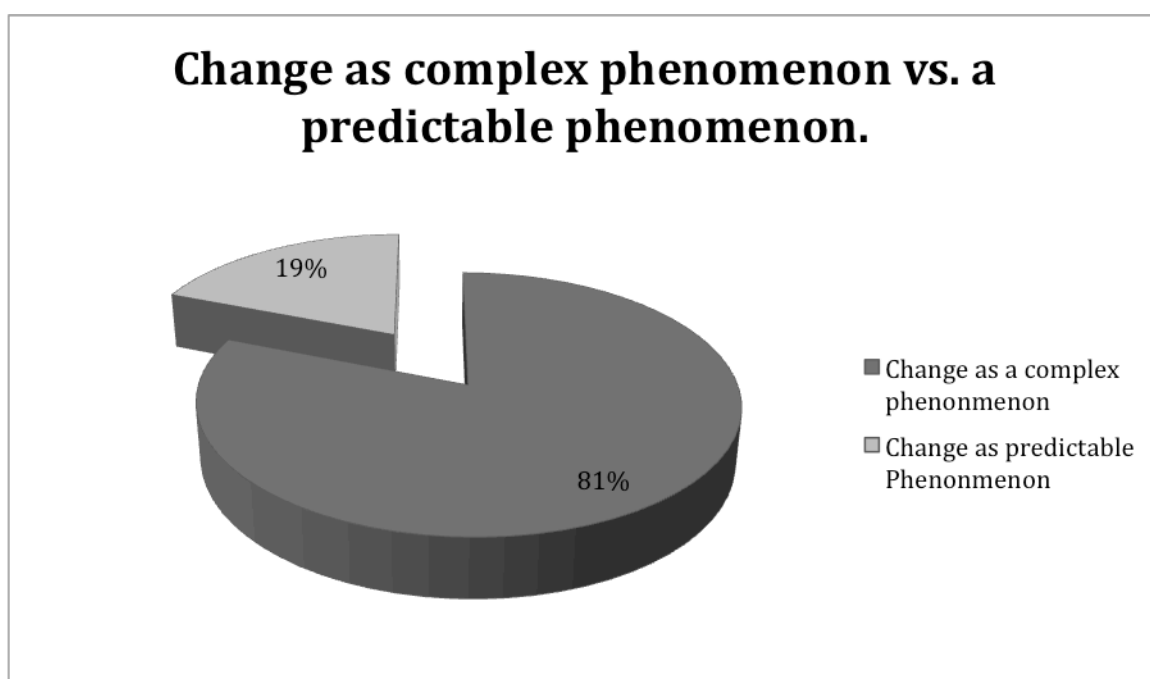
FIGURE 4.2: STORIES SEPARATED INTO CATEGORIES ACCORDING TO POSITION ON THE CHANGE MATRIX

source: Higgs and Rowland 2010: 126

TABLE 4.1: CHANGE AS A PREDICTABLE PHENOMENON VS. A COMPLEX PHENOMENON.

	X-axis
Changes as predictable phenomenon	7 (19%)
Change as complex phenomenon	31 (81%)

Source: author

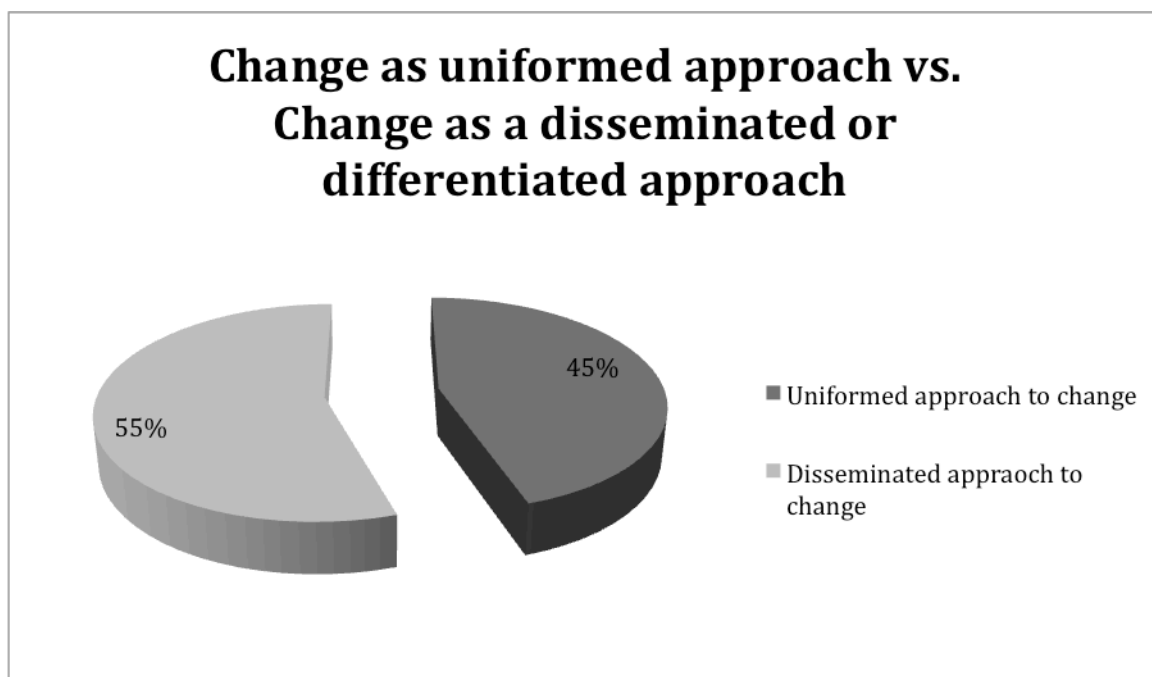
FIGURE 4.3: CHANGE AS COMPLEX PHENOMENON VS. A PREDICTABLE PHENOMENON

Source: Author

TABLE 4.2: UNIFORMED APPROACH VS. DISSEMINATED OR DIFFERENTIATED APPROACH

	Y-axis
Uniform approach to change	17 (45%)
Disseminated and differentiated approach to change	21 (55%)

Source: author

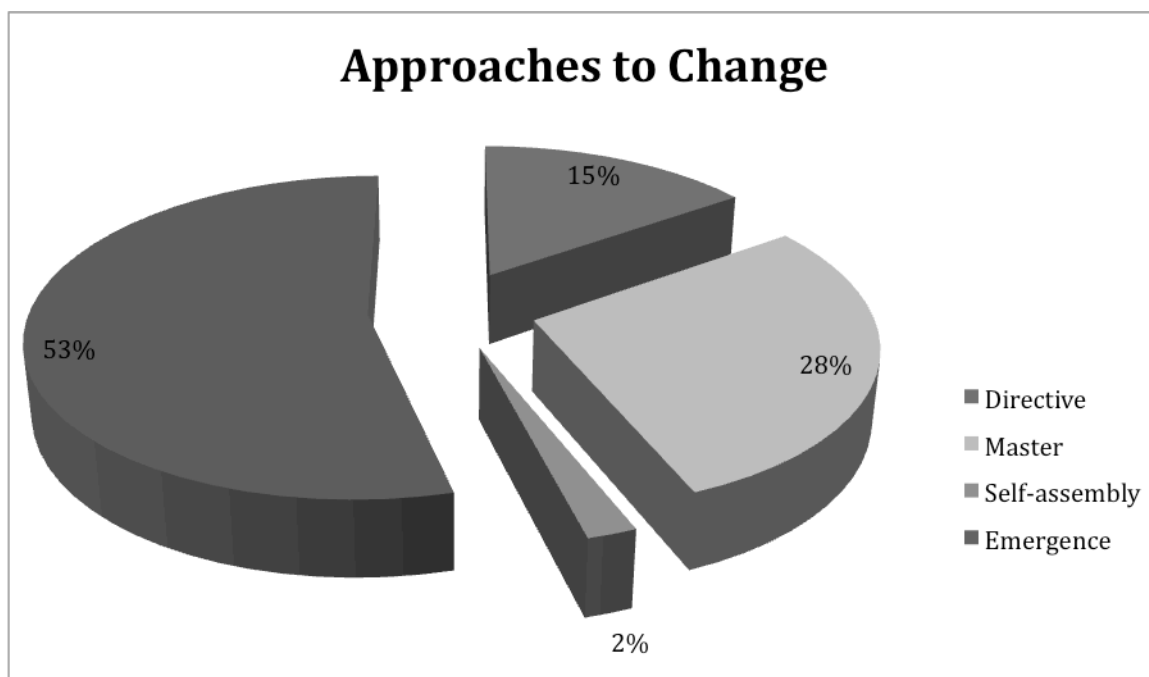
FIGURE 4.4: UNIFORM APPROACHES VS. DISSEMINATED OR DIFFERENTIATED APPROACHES TO CHANGE

source: author

TABLE 4.3: APPROACHES TO CHANGE DIVIDED BY STORY

Approaches to Change	Number of stories reflecting specified approach to change
Directive	6 (15%)
Master	11 (28%)
Self-assembly	1 (2%)
Emergence	20 (53%)

source: author

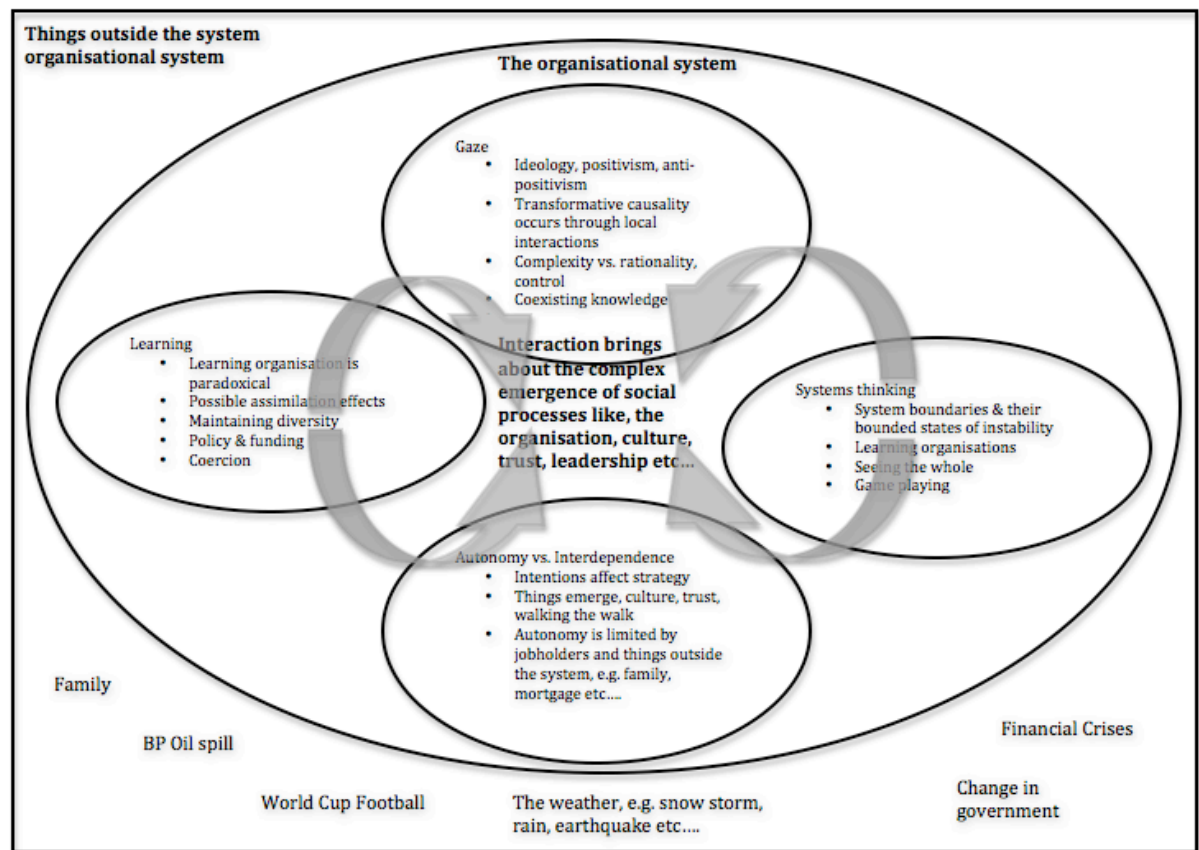
FIGURE 4.5: APPROACHES TO CHANGE DIVIDED BY STORY

source: author

4.3 Evaluation of Categories within the model.

The following model is a replicated version of the model presented in Figure 2.1 and includes the themes, patterns, and categories presented throughout the literature review. Using content analysis, to explore the phenomenon in question each transcribed interview was analyzed using these themes, patterns, and categories presented throughout the literature review and adapted into Figure 4.6.

FIGURE 4.6: ADAPTED COMPLEXITY MODEL INCLUDING THEMES



source: author

4.4 Evaluation of the Complexity Gaze component of the model

Under the complexity gaze, the researcher selected the four themes to explore the informants change stories. Each interview was divided into discrete stories and assessed for themes that fell under the complexity gaze. The first theme, labeled G1 for Gaze 1 referred to the notion that, within organisations, there is no one knowledge, there are instead multiple, coexisting pieces of knowledge.

G1. No right knowledge but many coexisting conflicting pieces of knowledge.

Of the thirty-five discrete stories identified by the researcher, none of the interviews seemed to clearly reflect the notion of coexisting pieces of knowledge. The closest quotes that the researcher identified were

“The problem is what are the priorities, the problem is getting the ministries aligned with similar priorities (Interviewee 1).”

“Other ministries did not agree with the targets so now it is critical to align with other ministries, this is why we are planning to have a consultation with other ministries so that we can all agree on common goals, targets and indicators (Interviewee 1).”

“We cannot continue to operate in silos, we need to operate in more integrated ways (Interviewee 6).”

Although, only two of the interviews revealed this theme and the quotes only vaguely reflect the notion of conflicting and multiple knowledge within organisations. This notion is well established within the dominant discourse of organisational studies, particularly among learning theorists (see Harrison 2009; Hastings 1993; Revans 1980; Gravey *et al.* 2010; Urich 1993; Von Krogh *et al.* 1994). Although the evidence here does not reflect this theme, this observation should not negatively affect the research questions since it is not central to the notion of a complex adaptive systems.

For the second theme under the complexity gaze the researcher explored the notion of transformative causality as presented in the literature review. Transformative causality refers to the notion that social processes emerge through a series of interactions that help to form wider social patterns. Transformative causality refers to causality that transforms both the entity and the wider social structures or patterns (Stacey 2010).

G2. Transformative causality refers to the notion that humans are involved in an interplay of local interactions, (self-organisation) or intentional acts that form personal identities. These population wide patterns emerge as entities form patterns that simultaneously form themselves

From the researchers’ interpretation of stories, transformative causality seemed to be very dominant throughout the stories. Of the thirty-eight interviews, discrete descriptions of transformative causality appeared forty-six times. Not all stories reflected themes of transformative causality, but all interviews reflected themes of transformative causality. The

best example was perhaps an example cited by two informants. One informant, who was part of the change management team, described the change as having emerged. He stated:

“We are in the midst of changing our culture. We have adopted what is called the FISH philosophy, as a way of changing the work environment. It started because one of our directors, after we had a very fiery meetings that seemed to be going nowhere. Then one of our directors asked me if I had ever read the book FISH philosophy and she loaned it to me. Then I loaned to Permanent Secretary who I did not know she had read it before, she felt it was a timely reminder, we bought 60 books and the Permanent Secretary wrote a note in each book addressed to each director, which was then given to all directors. We then went on a retreat, where we all learned and talked about the book. The Permanent Secretary, who is the CEO within the public service, drove it all. I think that when there is an indentified champion things seem to happen much easier. (Interviewee 8)”

This quote clearly demonstrated that successful change was about local interactions and changing conversations. What is even more interesting is how the Permanent Secretary learnt about the book. One director introduced the book to another director who then introduced it to the Permanent Secretary. Once she had bought into the book, the team then determined how they were going to go about enacting this change throughout the ministry.

Another interesting observation refers to the way in which the Permanent Secretary went about enacting the change. She wrote a personalized note in each book, and sent a copy to all her directors. During the interviews the researcher observed that in almost all the offices, pictures of fishes could be seen displayed on office doors and walls. One informant described the way in which they saw a change in the way employees work and talk to each other. She stated, “the way people talk to each other has transformed the office culture.” A change that was both changing the people involved and the office culture, transformative change.

Another example of G2 came from an informant who stated:

“Infrastructure things are easy, but if you do not setup a community officer, if you do not put programs in which you start engaging the community, certain things will not happen. Things like communities looking out for each other. Dealing with things like youth conflict, sports programs and start building communities after the implementation assess are there any changes (Interviewee 1).”

From the researchers interpretation, the informants had tacit knowledge that for change to come about, one needs to change conversations, change the way people interact with each other. Her comment implies that by changing the local and intentional actions of persons being affected by the change, one can change the group. Although the dominant discourse speaks about soft and hard change, this informant was describing what she later referred to as 'leadership' and being able to do community work, about being able to enact social change, which is not about building buildings. She understood that the intentional actions of a community worker who has access to resources will be able to change the way people interact within their community, changing them and their community at the same time. She understood that community officers would be able to enact change through a series of interactions with the community. Although not said explicitly, implicit in her statements was an understanding of change as being a complex adaptive process of transformative causality. She further went on to say that:

“Community officer need to build leadership, instead some community leaders start using their power to include and exclude others (Interviewee 1).”

Although this statement refers to the negative side of enacting change, the informant understood that this negative approach also had an impact on the way the community would interact and by extension the social change that would emerge as result of the actions of the community officer. This negative approach would also change the way people in the community interact with one another while simultaneously changing the community. This observation also brings us to our next theme:

G3. Social patterns emerge through the interplay of power relations.

Although these themes G2 and G3 are very similar, this third theme, G3, emphasizes the impact of power relations on the way change emerges. The preceding quote emphasizes the importance of the emergence of local interactions. It also highlights an awareness of the influence of power. The problem with these two themes is that they are very much interrelated and some examples used for one can also be used for the other. Both themes refer to emergence, and transformative change but the difference is that G3 emphasizes the interplay of power in determining what social processes emerge.

From the researchers interpretation of the stories, this theme appeared in thirty-six of the thirty-eight stories and in all the interviews. Power seemed to have a great influence on the way things emerged within these organisations. Since in all of the interviews informants seemed to convey at least one lengthy story that contained the theme of power influencing the way things emerged. Two informants referred to change in the following ways:

“Whenever governments change, it is important to change the jargon to suit the needs of the current administration (Interviewee 2).”

“It is never a clean process, things kind of emerge. Political forces determine what happens in organisation (Interviewee 6).”

Another informant described her greatest challenge as being:

“My greatest challenge is that, because we are responsible for research and policy development, we cannot say we graduated X many people, we cannot publish in the papers that we have written X many policies, the public does not care, so we do not have enough political mileage. So justifying the policy and research department is sometimes more difficult (Interviewee 6).”

These informants understand that power influences the outcome of change, how change evolves as the last quote suggests, relates to the way in which political tides play out. One informant stated that he thought

“change in his organisation was successful because the champion was the Permanent Secretary (Interviewee 8).”

The final theme under the complexity gaze has to do with the notion that cause and effect are only knowable in retrospect.

G4. Cause and effect are only knowable in hindsight.

Very few interviews, four interviews, reflected theme G4. It is likely that the methodology chosen for conducting the interviews, did not tease out this information from informants. Two examples did stand out as clear indications that at least two informants had the perception that cause and effect within organisations was a non-linear unpredictable process. Informants stated:

"In doing developmental programming, there are no guarantees that the program will work, you take a chance and hope that it will work (Interviewee 1)."

"A lot of time we have the policy in place and then after we have to figure out how to do it. We heard about the policy through the news, a lot of times people make decision and then the technocrats have to figure it out. You study policy in a book and they say there is a process, but it does not happen like that. Good examples can be seen from election promises. After politicians make election promises it is the technocrats who have to figure out how to implement these promises or policies (Interviewee 6)."

In analyzing the stories, it is clear that some change stories reflected the notion that cause and effect are only knowable in hindsight or at least it is difficult to know what will work within the development context. In one of the examples above one can go so far as saying that very often technocrats are building the bridge as they walk on it. Another informant stated:

"I don't think we can get up one morning and predict everything. Development work is not as clean as science. There are too many variables that impact everything, we were going along with a plan that we thought embraced everything and then we had a change of government and things suddenly need to be changed (Interviewee 1)."

Although this statement is also relevant to discussions on systems thinking, this statement clearly demonstrates that this informant understands cause and effect to be a non-linear loosely predictable process. For this informant, change is not of the if x then y variety, but more of the form "if the king died then the queen died" (Tsoukas and Hatch 2001).

Additionally, inspiration for this study came from the commonly cited observation that 70 percent of organisational change initiatives fail (Beer & Nohria 2000). Intuitively, if cause and effect were as straightforward as the literature suggests, then the link between organisational change failure and success would be more obvious. Although the data in this study does not strongly reflect that cause and effect are only knowable in hindsight, more research would be needed in order to make this conclusive. Furthermore, from the previous observations analysis of G2 and G3, change seems to emerge through local interactions and the influence of power. One can conclude that it is likely that cause and effect will only be knowable in hindsight under these conditions. More research would be needed in order to make the findings conclusive.

4.5 Autonomy versus Interdependence

Under autonomy versus interdependence, the researcher identified two themes from the literature review. The themes were labeled A1 and A2. Each interview was divided into discrete stories and assessed for themes of autonomy versus interdependence as presented in the literature review. The first theme, labeled A1 refers to the idea that people within social systems play games they aim to win. People strategize to find ways of achieving particular agendas, which very often means that intent affects strategy (Stacey 2010).

Before proceeding with the following chapter, it is important to note insights from Fishman and Miguel (2008), who in writing on corruption note that because of the nature of studying corruption, informants rarely admit that they are in fact participating in corruption. Similarly, it is unlikely that participants would admit to playing games or manipulating situation to their benefit. Consequently the following analysis is very interpretive and makes associative assumptions based on indirect evidence for the theme of ‘playing games’.

A1. People play games; they strategize to find ways of achieving particular agendas.

Surprisingly, this researcher was able to identify seventeen discrete appearance of the theme of people playing games. Perhaps the most telling evidence of people being aware of political games comes from the interviewing process. Since all interviews were recorded, when the researcher asked if he could record the interview seven of the ten informants expressed concerns about being quoted directly. One informant stated:

“There are certain things I cannot say because I have to play the political game.¹”

This notion of informants playing games within organisations is not often presented within the dominant discourse of organisational studies, this study found a surprisingly high number of incidents that reflected the theme of playing games. The following quotes highlight the presence of the theme of playing games.

“Administration is key, because whatever you are doing needs to fit in with the goals of the administration, we have to link our projects to the overall theme or the overall goals of development, we have to align ourselves to pillar X of a particular policy (Interviewee 6).”

¹ This quote was deliberately not cited to protect the identity of the source.

“Whenever governments change, it is important to change the jargon to suit the needs of the current administration (Interviewee 2).”

“Issues of administration has been difficult, in issues of communication, one needs to be careful in how one maneuvers and what one does within the context of the program. To avoid miss conception and wherever there is dearth something will always coming to fill it, so you need to be very vigilant. Can be challenging if you are strapped for resources (Interviewee 5).”

Within this context, administration refers to the government in power at the time. During all interviews informants made some reference or another to the current government and showed concern for new policies and the continuation of their employment or projects they have been working on. Several informants stated a need to align current strategies with the strategies of the new government. It is important to note that some of the quotes used in this theme A1, can also apply to G3 – Social patterns emerge through the interplay of power relations.

As presented during the literature review, the dominant discourse of organisational studies often speaks of autonomy or empowerment. If it is the case that people play games, as these informants suggest, then the key part of playing a game is having other people to play the game with, which in the researchers views seriously questions the notion of autonomy. Empowerment on the other hand refers to the agent being able to take agency (Stacey 2007). The following analysis addresses themes of agents being able to take agency within an organisation.

A2. Employees are only as autonomous as their jobholder and social ties outside of the workplace allow. Social processes constrain and enable employee autonomy.

Theme A2 relates to social processes outside the organisation that sometimes constrains employee’s autonomy within an organisation. Under this theme, employees are only as autonomous as their jobholder allows. One informant stated in speaking about one of her dreams for the future of her organisation that she hopes decision makers begin to:

“Think about country good, rather than throwing out what the previous administration has done, or changing people within in the public sector who are professionals doing good jobs. It

is general practice when a new administration comes in they want to put their own stamp of approval on everything. We are too small of a country to reinventing the wheel constantly.²

This informant argued that within Trinidad and Tobago, when new governments attain power, it is common practice that if you are suspected of supporting the previous administration, very often professionals are sent home. Which is why she is unable to actively participate in political campaigns. This informant stated:

“I have bills to pay³”

Although this was the only example of theme A2, these quotes reveal considerable insight on the importance of considering a perspective that is informed by the notion that employees are limited and constrained by social processes, like mortgages, family obligations and other commitments. Although this study did not reveal sufficient evidence to suggest it is the case that employees are only as autonomous as their jobholders and social ties outside of the workplace allow. Like corruption this theme is difficult to assess because informants are unlikely to talk about them for several reasons. Informants may not be aware that they play games. Alternatively, informants may deem some of these opinions as having the potential for threatening their jobs and consequently may choose not to divulge information.

4.6 Systems thinking

Under the heading systems thinking, the author argued that the current discourse on systems thinking does not account for transformative causality and consequently does not reflect the reality of organisations (Stacey 2010). As a result the author called for a rethinking of how we understand organisations, pointing out that theorist should not describe organisations ‘as’ a system – a constitutive idea – but instead should understand organisations ‘as if’ they were a system – a regulatory idea. The regulatory way of understanding organisations allows for a ‘both....and’ understanding in which organisations are understood as being the appearance of reality and not reality itself. In summary, this theme looked for incidents in which informants described the organisation from the regulatory perspective versus the constitutive perspective.

² This quote was deliberately not cited to protect the identity of the source.

³ This quote was deliberately not cited to protect the identity of the source.

S1. Organisation should be understood from a regulatory perspective versus as constitutive perspective.

To assess this theme, the researcher identified the number of times informants described the organisation or aspects of their change story as a system and the extent to which organisation described systems as being reality versus the number of times informants described organisations as being a reflection of reality. That is to say the researcher assessed the frequency of descriptors that reflected a regulator perspective versus a constitutive perspective. Of the ten times in which informants used the metaphor system, to describe organisations, in all incidents in which the word systems was used, it was used from the constitutive perspective. None of the informants seemed to be aware of the regulator perspective. Informants all described their organisation as systems. Take the following quotes for example,

“I would like to see the day where you have a system so designed, where you can enter as a carpenter and graduate as a civil engineer, everyone counts..... I want a system designed so that you can achieve your highest potential. After we educate people, we need to ensure that they have jobs after. We are hoping to move toward more open-ended systems (Interviewee 7).”

“The tertiary level education system versus the sector, the system would be the ministry or university while the sector would be ministry of education, the employers, the accreditation council etc.. the systems is affected by the sector and vice versa. We need movement in and out. We as a ministry, we need to be better at being a learning organisation. We need to be mindful of the other areas that affect people that can affect their ability to be innovative people (Interviewee 6).”

This suggests that informants did perceive organisations from a constitutive perspective, organisations as being systems. These quotes also revealed a distinction not made in the literature review. The word system can be used to describe the organisation and mechanisms within the organisation. The second use of the word system refers to procedures and policies while the former refers to the organisation. Using the first example, the informant states he “would like to see the day where you have a system so designed” this statement refers to both an organisation and the procedures policies and rules that make up the organisation. Within the dominant discourse, rules, policies and procedures are normally referred to as hard systems

while soft systems refer to the more messy social processes (see Senior 2008: 61; Yeo 1993). Under the Kantian notion of regulatory and constitutive ideas, neither the soft nor the hard systems can be viewed as reality, but only versions of it. In both cases, informants seem to describe 'systems' as being reflections of reality. Take the following quotes for example:

"Some people think that letting people into tertiary level education waters down the system and that some people should not be allowed into the system (Interviewee 5)."

"Because various companies are fighting for survival, they are all thinking within their own individual system. Since all providers are setting up their own programs, they are only thinking within their own systems and not within a large context (Interviewee 7)."

Both informants are speaking from the constitutive perspective. They are not aware that there is no real system, only interpretations of it. To refer to systems as if they are real tangible things, likely will not serve well in our understanding of organisations. From these examples, the author would argue that although the informants perspectives do not reflect an understanding of systems from the complexity or regulatory perspective, it does reflect that informants do not understand or are not conscientious in relaying their stories that the 'system' is not a reality, but a version of reality.

S2. Organisations as bounded states of stability and instability

The second theme under the systems thinking component of the model, suggests that theorist and practitioners should understand organisations as a complex adaptive system. A perspective contrary to the dominant discourses in organisational studies, which maintains that organisations are, bounded states of stability and instability. To assess informants' perceptions of reality, the researcher focused on stories that suggested systems or organisations were not bounded, but were involved in multiple interactions that help construct organisational reality. It should be noted that many of the incidents within the stories, were also the same incidents that indicated a complexity gaze and autonomy versus interdependence, in the earlier section of this dissertation. The researcher speculates that this is likely because both sections focus on local interactions.

The author identified thirty-four incidents in which informants described events from outside the 'system', affecting social processes within the system. The notion of systems being bounded states seems to contradict the perceptions of informants in this study. All interviews

referred to the change of government affecting their work. This may be more prevalent in ministries than in other types of organisations, but these changes affect the way people do work, who they work with, what projects they work on a term, what Schein would refer to as organisational culture (Schein 2004). One informant stated

“Change of government has affected as my work by expediting certain projects prior to the new administration to ensure that we got particular funding. This new administration asked for the consultation to be expedited. There are a series of events that would have lead to that because the talk is that the government funding is particular low so any funding that we get would be helpful⁴.”

In this particular incident, this ministry was asked to conduct a consultation with various stakeholders, in an effort to secure funding. This emerged because someone at senior level, who was playing the game, devised a strategy that was informed by their intention to gain access to funding during a time when ministry funds were low. This person demonstrated transformational change, playing games, interweaved interactions and unbounded states. Note the statement “there were a series of events that would have lead to that” this statement clearly demonstrates a complex adaptive process. These observations synthesize many of the previous components of the model while highlighting how organisations are not bounded by stable or unstable states. Another informant gave a similar story.

“We work within a U&I framework, that is the collaboration between University and Industry, trying to ensure that the programs in the department are relevant to industry. Take for example the Water and Sewage Authority requested for people to be trained, so we developed an Associate Degree program to train people on water and waste management. When the three-year part time study was finished, students asked for a bachelor program, which meant they were responding to the needs of industry....

Later, the Water and Sewage Authority separated their wastewater and water management, because they felt the two fields were very different and need to be managed differently. In response, our programs have also been separated (Interviewee 3).”

From this example it is clear that the current organisational reality emerged through a series of interactions. In this example one ‘system’ made a request of the other, and in responding to

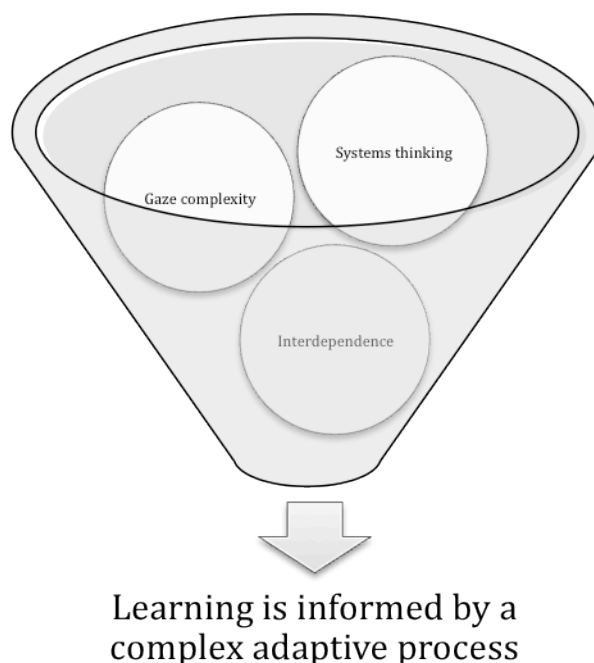
⁴ This quote was deliberately not cited to protect the identity of the source.

that request changed the inner workings of their organisation through interweaved interactions, demonstrating transformative change. The idea that organisations are systems in the form of bounded stable and unstable states is not reflected in this above story or the other stories. Rather the story seems to reflect more of a complex adaptive process of change by demonstrating notions of transformational change, playing games, interweaved interactions and unbounded states. These stories revealed that informants' perceptions of change seemed to reflect the notion that systems are not bounded

4.7 Discussion on Learning.

This dissertation has argued that within organisations, social phenomenon's emerge through normal ongoing local interactions, usually through stories, language, conversations, metaphors and symbols (Brunner 1990; Erickson 1995; Mowles 2010; Stacey 2010). Consequently, learning practitioners should approach organisational change, training and development in similar ways. As a result, themes from this section were not analyzed in the same way as other components of the model, but instead, insights from the other sections of this model were intended to inform practitioners approach to learning.

The model presented four components learning, gaze, autonomy versus interdependence, and systems thinking. In evaluating the extent to which findings reflected the components of gaze, systems thinking and autonomy versus interdependence, of the eight themes analyzed, all themes seemed to be present within the interviews. Most importantly, as Mowles (2010) and Stacey (2010) suggest, informants stories reflected an understanding of organisational reality that emerges through the interweaving of many interactions, a processes similar to the complex adaptive process proposed in the literature review (Mowles 2010, Stacey 2010). Figure 4.7 demonstrates how readers may wish to view learning with respect to other components of the model, but should note that all components of the model are robustly interdependent.

FIGURE 4.7: AN APPROACH TO LEARNING INFORMED BY A COMPLEX ADAPTIVE PROCESS

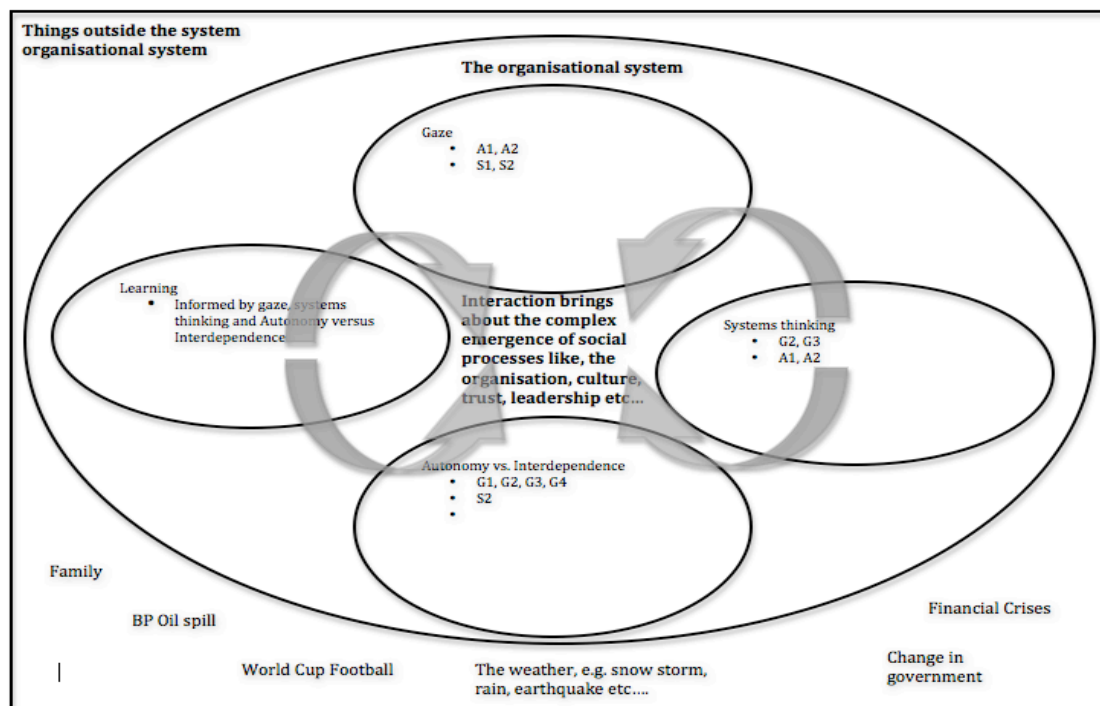
Admittedly, themes **A2** – employees are only as autonomous as their jobholder and social ties outside of the workplace allow –, **G1** – no right knowledge but many coexisting conflicting pieces of knowledge, **and G4** – cause and effect are only knowable in hindsight, were not strongly reflected in the stories of participants. Likely because the methodology chosen for conducting interviews was not structured enough to draw out these themes. Finally **S1** – organisation should be understood from a regulatory versus a constitutive perspective revealed that most informants view systems from a constitutive perspective. Further research would be needed to determine if practitioners who view their organisation from a constitutive perspective has some correlation with organisational change failures. Most importantly **A1** – playing games, **G2** – transformative causality, **G3** – social patterns emerge through the interplay of power relations, and **S2** – organisations as being unbounded states, notions that paralleled the complex adaptive process, in which local interactions, power and emergence were strongly reflected in informants stories.

It should be noted that none of the components presented in the literature review are discrete, but rather they interact in complex ways. Evident by the observation that some of the quotes used for one component could also have been used as examples for other components of the model. Take the theme of game playing for example; game playing is not possible without interaction with other game players (Dawkins 1976; Bourdieu 1998; Stacey 2007; 2010). As a

result game playing will also reflect the following themes **G1** – coexisting pieces of knowledge, **G2** – transformative causality and **G3** – patterns emerge the interplay of power.

Similarly in demonstrating that systems thinking should not be understood as a bounded state, the researcher needed to demonstrate that interactions from outside of the ‘systems’ also affect the internal social processes within the organisation. This would mean that themes **G1** – coexisting pieces of knowledge, **G2** – transformative causality, **G3** – patterns emerge the interplay of power and **A1** – people play games, would also be examples that demonstrate non-bounded states. Figure 4.8 demonstrates themes that also appeared in different components of the model. Consequently, insights from gaze, systems thinking and autonomy versus interdependence should inform approaches to learning and should be seen as being robustly interdependent.

FIGURE 4.8: THE COMPLEXITY MODEL DEMONSTRATING THE ROBUST INTERDEPENDENCE OF EACH COMPONENT



Source: author

4.8 Unexpected theme

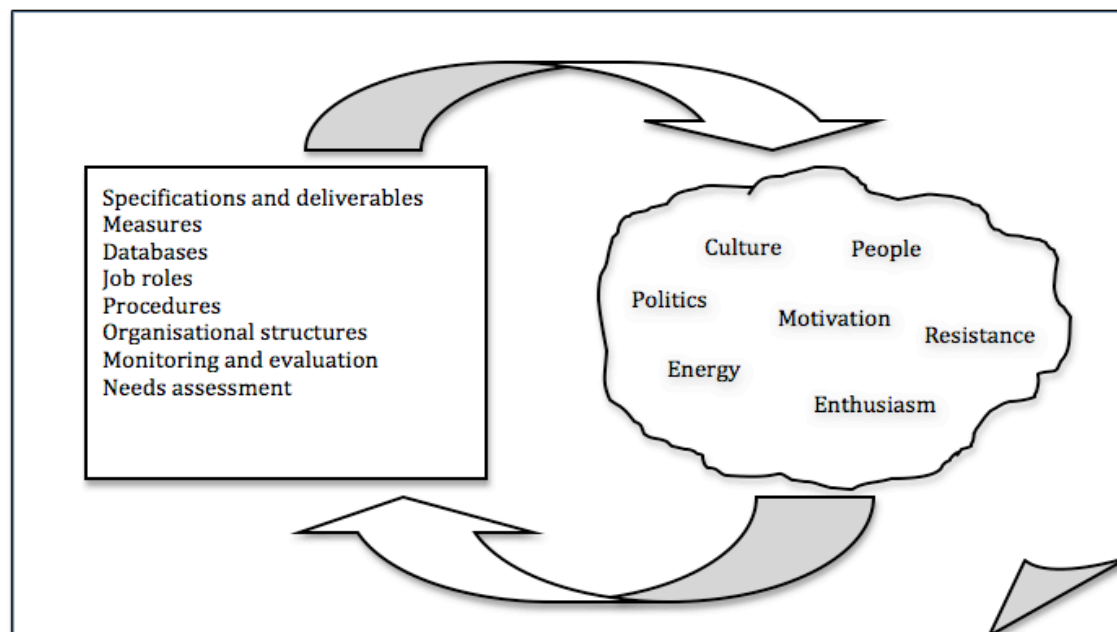
Throughout the interviews, there were eighteen incidents in which informants made reference to the need for monitoring and evaluation, performance management, needs assessment or data collection. Within the dominant discourse these observations are usually referred to as the ‘hard’ aspects of management versus the soft or messy components of management (see Bainbridge 1996; Senior and Flemming 2008; Yeo 1993). Hard usually refers to those things within organisations that are well defined and unambiguous, while soft usually refers to messy, ill-structured and ambiguous things within the organisation (Senior and Flemming 2008). Measuring usually falls into the hard category, but informant’s stories revealed a blending of the two categories. Take a quote from one informant for example,

“You cannot have development without measurement, but measurement needs to be context specific. We are still doing things but some things we do not know how to measure and cannot measure”

Things like measuring usually fall under the category of ‘hard’ as measuring is usually very straight forward, here we have informants implying that measuring falls under the soft or messy aspects of reality. Another informant stated

“Some decision-making is top down, some decision-making is consultative, both are important. We need to work from an information informed perspective. Sometimes the data does not help you, it is a blend, you need to look at both, using your intuition is sometimes very important.”

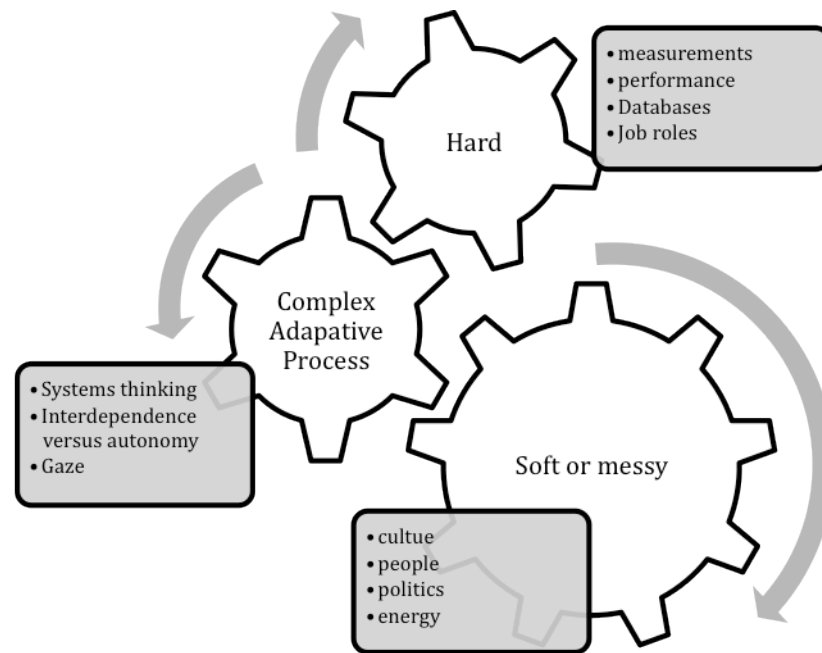
Bainbridge (1996) provides a useful diagram for conceptualizing hard and soft approaches to management. The following figure is an adapted version of Bainbridge’s soft versus hard approach (1996).

FIGURE 4.9: SOFT VERSUS HARD ASPECTS OF CHANGE

Source Bainbridge (1996)

Bainbridge's (1996) model is a popular way of conceptualizing the hard and soft approaches to management, but from the quotes, informants seem to be suggesting more integrated ways of understanding the reality of organisations. One informant suggests using intuition an approach that strongly contradicts the dominant discourse, a discourse which aspires to rational approaches in understanding and making decision within organisations (Scharmer 2009; Senge *et al.* 2004). To suggest using intuition, at least in the dominant discourse would be considered taboo.

This dissertation has provided evidence that stories of practitioners reflect a complex adaptive process. The following is a redrawing of Bainbridge's (1996) soft versus hard model that includes the complex adaptive process. Here the author suggests, that like learning, hard and soft aspect of organisations should be understood from a complexity informed perspective. This unexpected theme should be informed by an appreciation of the way in which the complex adaptive process affects ones ability to measure social phenomenon.

FIGURE 4.10 SOFT VERSUS HARD APPROACHES INFORMED BY A COMPLEX ADAPTIVE PROCESS

source: author

4.9 Concluding comments

The preceding chapter outlines the findings of the present study using an adapted version of the model presented in the literature review. The author assessed the qualitative data for themes reflected in the stories of informants. This chapter also included a special discussion on the role of learning within the model presented. From these findings, it can be concluded that informant's stories reflect a complex adaptive process.

CHAPTER 5: DISCUSSION

5.1 Introduction

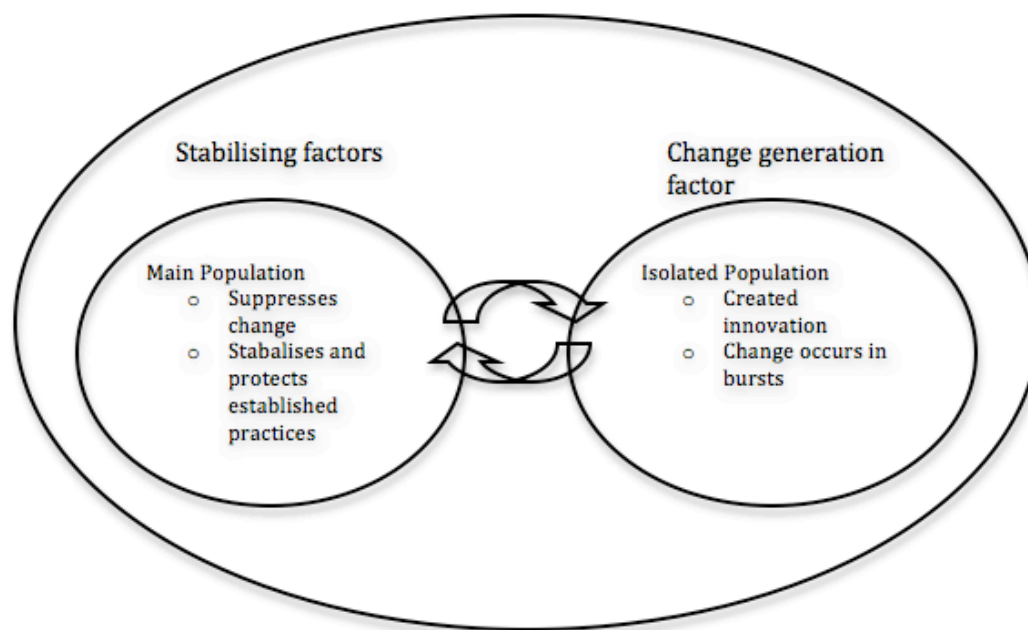
In the preceding section, the author discussed the findings of the current study under the various components of the complexity model. The following section seeks to place the findings of this study into the dominant discourse on organisational change and developmental management. In this section of the dissertation the author will compare the findings with the hypothesis, aims and objectives of the study.

It should be noted, that traditionally many papers would separate implication from theory and practice at this stage. Previously the author stated, “that unless academics combine methodological rigour and practical relevance then the academic practitioner polarization in management research will harden (Higgs and Rowland 2010).” As a result the following discussion would not separate the discussions on theory and practice but will discuss the two components as elements impacting on one another.

5.2 Implications of unexpected theme on the presented model.

Previously the author stated that this unexpected theme suggested a need for data collection, performance management, monitoring and evaluation etc.... This need does not affect the presented model, but serves as a reminder that a complexity informed perspective helps to inform practitioner’s actions. These findings further demonstrate the complexity of organisational reality.

Take for example if one wished to measure the organisational culture or peoples attitudes towards work. For the complexity theorists, measuring organisational culture is not possible since systems are ever changing. They have a general direction, and are governed by a few simple guiding rules (Aldrich 1999; Wheatley 1993; Summit-Bonnici and Wensley 2002). So if one took measurements at a particular point in time, this measurement may be just prior to a new reality emerging. Some complexity theorists argue that change occurs at the periphery of the system in a sort of dual process. Summit-Bonnici and Wensley (2002) present a diagram in which they argue that small populations first change, and these small populations then affect the larger population. Understanding this perspective helps the practitioner contextualise any data collection and understand that the data may or may not be valuable, a view that is rarely presented within the dominant discourse.

FIGURE 5.1: THE DUAL NATURE OF EVOLUTION

Source: Summit-Bonnici and Wensley 2002

5.3 Implications of complexity informed perspective on Human Resources Development and Organisational change

With studies like the current study, it is often very difficult to generalize findings beyond the case explored (Bryman 2004, Burrell and Morgan 1979, Easterby-Smith 2009). Although this study did have several limitations, among them being a small sample size, the semi – structured interviews that could have had more structure, not all themes were revealed, the researcher used qualitative data instead of reflexive data as recommended by complexity theorist, and the researcher only used qualitative data. The findings did however reveal that stories of practitioners did reflect notions of complex adaptive process evident by stories reflecting transformational change, playing games, interweaved interactions and unbounded states

The results of this study suggest that further research is needed within other organisations and in other countries to determine if these findings can be replicated. Complexity theorists strongly challenge the dominant discourse of management and demand a rethink of how we think about organisational studies (Shaw 1997, 2002; Mowles 2010; Stacey 2007, 2010). If these findings are taken as being generalisable, or other studies can duplicate these findings, then these findings have strong implications for organisational studies.

Organisational studies would seriously need to rethink how it understands organisations with respect to notions of cause and effect, directive, control, strategy, understanding that people game the system and how it approaches organisational change. More and more theorists are beginning to acknowledge that organisational change is complex social process and theorists need to begin to change the way they approach change (Burns 2004; Harrison 2009; Reid *et al.* 2004; Scharmer 2009; Senge 1997; Senge *et al.* 2004). Complexity theorists argue that change is a complex messy process that cannot be implemented as a uniformed planned activity (Stacey 2007, 2010; Shaw 1997; Wheatley 1993). The dominant discourse strongly adheres to the planned strategic approach, take for example Falletta (2005), who outlines several different models of change all of which assume that change can be implemented in structured linear or sequential approach. Similarly popular textbooks by Senior and Flemming (2006), Burnes (2004) and Cummings and Worley (2008) all take similar approaches to change. Burnes (2004) however does deviate from the norm a little, in suggesting an emergent process of change, but many of his techniques are still based on the assumption that change can be mandated from top-down.

Some complexity theorists however, have re-conceptualized the Lewin's classic 3 – step model of change. Lewin's original model involved three parts; unfreeze, moving and freeze (Burnes 2004; Cummings and Worley 2008; Senior and Flemming 2006: 349).

1. **Unfreeze:** concerns 'shaking up' of peoples modes of thinking, disturbing the status quo, recognizing a need for change, creating a case for change.
2. **Moving:** effecting the change, making actual changes, facilitating learning
3. **Refreeze:** institutionalizing change, embedding change.

Weick (1995 as cited in Higgs and Worley: 125) in reframing the Lewin model proposed “(1) freeze – study the complex system at a point in time; (2) adjust – encourage and stimulate adjustments to achieve necessary changes; and (3) unfreeze – allow the system to continue functioning having made the adjustments.” This approach strongly contradicts the standard planned strategic approach to change.

The implications made throughout this dissertation suggest a radical rethinking of the dominant discourse on organisational studies. Complexity theorists argue that their theories cannot be applied, they can only inform practice (Allen 2001; Mowles 2010). The way to enact change is by changing the local interactions of people within organisations, by focusing

on conversations (Shaw 2002). For change to occur people must learn new ways of interacting, this study has suggested that it is time to reframe current theories on organisations to include a complexity informed perspective. Managers need to be trained to solve complex problems in non-linear, non-sequential ways (Sammut-Bonnici and Wensley 2002). A complexity informed perspective allows managers to be comfortable with their being no definitive solutions and allows managers to maintain temporary ‘holding positions’ (Gravey *et al.* 2009: 131; Lichtenstein 1996 as cited in Higgs and Rowlands 2010).

5.4 Evaluation of the Hypothesis proposed at the outset of the study.

- Hypothesis 1: Practitioner’s (or professionals) change stories reflect a complex adaptive process.

From the evaluation of the findings, practitioner’s stories do seem to reflect a complex adaptive process. Evidence of these findings were very strong with a particular prevalence of interweaved interactions and game playing. Other findings that support this conclusion are revealed by stories that reflect the influence of power on the outcome of social processes and that organisations were not bounded states.

- Hypothesis 2: Practitioner’s (or professionals) change stories reflect the notions of emergence and local interaction as presented in the current literature review.

Practitioners stories do seem to reflect emergence and local interactions. Under the map of change in section Figure 4.2, twenty of the thirty-eight stories were categorized under emergence. Themes for G2 – transformative causality humans are continuously involved in local interactions that simultaneously form personal identities and wider social patterns –, G3 – social patterns emerge through the interplay of power relations, S2– organisations as bounded states of stability and instability – and A1 – people play games; all reflected themes that indicated organisational reality was influenced by local interactions or interweaved interactions.

- Hypothesis 3: Practitioner’s (or professionals) change stories reflect notions of system thinking as presented in the current literature review.

The change stories of practitioner’s (or professionals) only partially reflect the notion of systems thinking as presented in the literature review. Stories reflected the theme for S2 – organisations as bounded states of stability and instability – but did not reflect the theme S1 –

Organisations should be understood from a regulatory perspective versus a constitutive perspective. Further research would need to be conducted to determine if there is correlation between change that is informed by a regulator perspective or a constitutive perspective in its correlation failures in organisational change.

- Hypothesis 4: Practitioner's (or professionals) change stories reflect notions of autonomy versus interdependence as presented in the current literature review.

There was strong evidence to suggest that theme A1 – people play games – was prevalent in the stories of practitioners. While there was very little evidence to suggest that theme A2 – employees are only as autonomous as their jobholders and social ties allow. Further research would need to be conducted to determine if social processes constrain or enable autonomy, it is suspected that the semi-structured interviews were too under-structured to tease out this theme. More research would need to be conducted before coming to a conclusion on this theme.

- Hypothesis 5: Practitioner's (or professionals) change stories reflect notions of complexity gaze as presented in the current literature review.

This hypothesis was judged to be true since the study found strong evidence for G2 – transformative causality humans are continuously involved in local interactions that simultaneously form personal identities and wider social patterns – and G3 – social patterns emerge through the interplay of power relations. The two other themes G1 – no right knowledge by many coexisting pieces of knowledge – and G4 – cause and effect are only knowable in hindsight are supported within the dominant discourse on learning and thus did not affect the outcome of this hypothesis (see Harrison 2009; Hastings 1993; Revans 1980; Gravey *et al.* 2010; Ulrich 1993; Von Krogh *et al.* 1994).

Evaluation of the Aims and Objectives proposed at the outset of the study.

- Objective 1: To provide a critical literature review of literature on organisational studies and its lack of emphasis on ambiguous complex organisational realities.

This aim was achieved. Due to the limits and in the length of this dissertation, it is unfortunate that author was unable to provide a detailed overview on the dominant discourse of management. Several authors have successfully outlined the history of management theory

(see Morgan 1997; Nelson 1974; Pugh & Hickson 1996; Stacey 2007). This dissertation did however successfully achieve all components of the stated objective.

- Objective 2: To establish a potential framework that embraces anti-positivist approaches to understanding developmental management and organisational change.

The author fully achieved this objective by outlining a novel framework which provided a model that strongly questions the dominant discourse.

- Objective 3: To demonstrate that stories of professionals working in developmental management and a change context reflect a complex adaptive process.

The author successfully demonstrated that many of the change stories reflected the notion of a complex adaptive process. Several themes demonstrated prevalence of local and interweaved interactions.

- Objective 4: To demonstrate potential associative links between development failures and the failure of organisational studies to embrace uncertainty.

One of the aims of this study was to make an associative link between development failures and organisational failure. The author proposed, that there is likely to be a correlation between organisational failure and developmental failure. The development context is managed by mainly non-governmental agencies and public sector organisations that are implementing change. Consequently, in building on the need for managers to be trained to understand complex versus complicated problems as presented in the previous section (see Litchenstein 1996 in Higgs and Rowland 2005 and Gravey *et al.* 2009). The author extends this argument to the development context. Claiming that development workers and managers are taught using similar textbooks and along similar structures as managers within the dominant discourse and they too need to be trained in to solve complex problems in a way that allows them to be comfortable with maintaining temporary ‘holding positions’ (Gravey *et al.* 2009: 131; Litchenstein 1996 as cited in Higgs and Rowlands 2010).

CHAPTER 6: CONCLUSION

Introduction

Additionally, change will always be part of developmental and development management, but until we find new ways of approaching organisational change, we will continue to have failure rates within organisational change of about 70% as suggested by Beer & Nohria (2000). Inspiration for this dissertation came from the observation that development theorists are beginning to critically question their approaches to development. This dissertation presents a radical alternative to common approaches to understanding change.

Theoretical framework

In chapter two of this dissertation that author put forward a framework for understanding organisational reality from a complexity approach versus the dominant discourse of planned strategic approaches to change (Stacey 2007; 2010). In this framework the author suggested four robustly interdependent components drawn from various authors within the discourse of management (see Burnes 2004; Bound and Garrick 1999; Cummings and Worley 2008; Eldridge and Stafylarakis 2002; Fowler 2008; Hastings 1993; Harrison 2009; Reid *et al.* 2004; Revans 1980; Senge 1999; Senge *et al.* 2004; Stacey 2007; 2010).

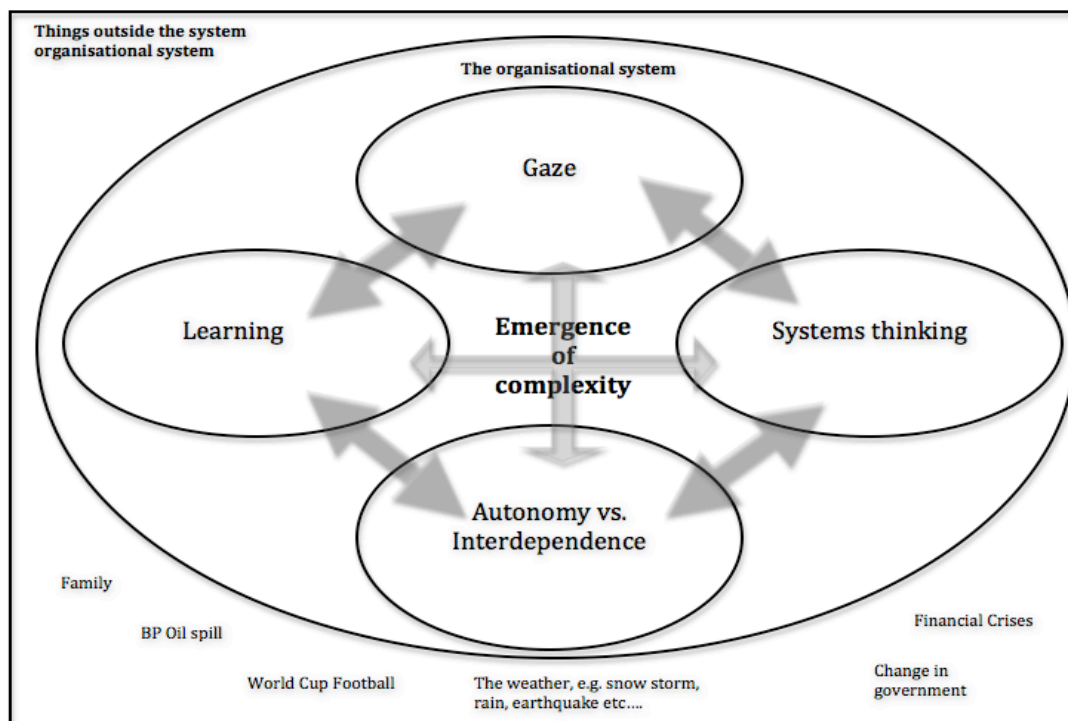
The themes presented were Gaze, Autonomy versus Interdependence, Systems Thinking and Learning. Under the Gaze component the author made the distinction between the objectivist and subjectivist theoretical standpoints (Bryman 2004; Easterby-smith *et al.* 2009; Gravey *et al.* 2009) and suggested that management adopt more subjectivist approaches to management (Gravey *et al.* 2009). Additionally, the author proposed an alternative to understanding cause and effect, which embraced transformative causality; causality in which “entities are forming patterns of interactions and at the same time, that they are being formed by these patterns of interactions (Stacey 2010: 57)”.

Under the Autonomy versus the interdependence component of the model, the author proposed that no individual could ever be purely independent because they are always caught in a kind of social game (Bourdieu 1998; Scott 1990). Here the author argued that social patterns emerge through ordinary local interactions through a transformative causal process known as the complex adaptive process (Stacey 2007; 2010).

Under the systems thinking component of the model, the author suggested that thinking of organisations as a systems is misleading since it makes two suggestions. The first suggests viewing an organisation as a system instead of ‘as if’ it were a system (Kant 2008). While the second suggests that a system is a bounded state, when in reality systems seem to have very limited boundaries and are affected by social processes outside of the organisation (Stacey 2007).

Finally, under the learning component, the author suggests that learning should be informed by a complex adaptive process, which focuses on organisations as conversations (Gravey *et al.* 2009; Shaw 2002). Here the author suggests a rethinking of traditional linear approaches to learning and argued for more non-linear approaches to change (Gravey *et al.* 2009). Figure 6.1 show a replica of the model presented in Chapter 2 of this dissertation.

FIGURE 6.1: A COMPLEXITY MODEL FOR UNDERSTANDING ORGANISATIONAL REALITY



Methodology

The author suspected that if the above framework reflected the reality of the organisations, then the change stories of practitioners within the field of development would reflect the various components presented throughout the theoretical framework (Higgs and Rowland 2010; Tsoukas and Hatch 2001).

During the methodology section of this dissertation, the author cited authors like Weick (1995), Higgs and Rowland (2010) and Alvesson and Skoldberg (2009) as complexity theorists who have argued that capturing the change stories of participants is appropriate for collecting the non-objective, subjective and inter-subjective data that reflect the reality of an organisation under a complexity perspective.

Findings and Discussion

Using semi structured interviews and a conversation ladder informed by Clutterbuck and Megginson (2005: 6) the author collected thirty-eight stories of change. These stories were then analyzed for themes that reflected the various components of the model presented in chapter 2 of this dissertation. The findings revealed that the change stories of practitioners demonstrated transformational change, playing games, interweaved interactions and unbounded states.

These findings suggest that the reality of organisations are likely to reflect a reality similar to the one presented in the framework. If these findings are to be taken to as being a reflection of reality, then organisational theory and practice needs to be seriously rethought.

The implications from these finding suggest that current models on Human Resources Development, Organisational Change and Strategic Management, all need to be rethought or re-conceptualized to include a complex adaptive process. Here the author has presented an alternative to the dominant discourse on organisational change. Furthermore these findings suggest that if development management adheres to dominant discourse of planned strategic approaches to change, then one of the major contributing factors to development failures may be attributable to failures in organisational change as suggested throughout this study.

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APPENDIX 1

Interview	Position	Date of Interview	Pages cited
Interviewee 1	Director of a Ministry	July 12 th , 2010	47, 49, 51, 52
Interviewee 2	Director of a educational department at one of the Ministries	July 20 th , 2010	50, 52
Interviewee 3	Director of an education department at community college	July 21 st , 2010	59
Interviewee 4	Director of an education department at community college	July 21 st , 2010	
Interviewee 5	Director of a major Educational program at community college	July 21 st , 2010	54, 57
Interviewee 6	International Program Officer with one of the ministries	July 26 th , 2010	47, 50, 51, 53, 56
Interviewee 7	Manager of technical and vocational training within a ministry	July 26 th , 2010	56, 57
Interviewee 8	New-system facilitator and team leader	July 28 th , 2010	48, 51
Interviewee 9	Program coordinator with ministries	July 28 th , 2010	

Nb. Some quotes were not cited to protect the identity of the informants. A list of the names interviewees can be provided to the examiner if needed. Other persons wishing to have a list of names may do so by request. Request will be subject to author's discretion and the reason for the request.