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Cracking the code: Towards a meso-level theory of organisation change

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Professor John Verster

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Abstract

Management scholars lament the lack of understanding of how organisation change actually happens. Simple reductionist models that describe planned, step-wise linear processes of organisation change fail to do justice to the complex realities that characterise organisations in natural flux. Such mechanistic conceptions are based on research methodologies that provide snapshots of the change process. While researchers claim to acknowledge change as continuous, it gets studied as episodic.

Although progress in pursuit of an understanding of change has been made through alternative approaches, such as storytelling, sensemaking and complexity perspectives, a systematic review of the organisation change literature revealed seven theoretical gaps that confirm the need for further research to yield an in-depth process understanding of change. Building this deeper theoretical understanding of change processes, together with the required practical skills and behaviours, is termed the "dual challenge". It represents both a theoretical and practical void requiring scholarly attention.

The purpose of the study was thus to contribute to the development of a non-linear, meso-level theoretical understanding of organisation change. To heed the call for empirically-rich longitudinal studies of change aimed at overcoming previous methodological limitations, an in-depth, real-time, single-case study was undertaken.

The unit of analysis selected for study was an instance of change in an industry-level financial services organisation, based nationally in South Africa. Data were collected continuously over 3 years and analysed to gain a meso-level understanding of how and why organisation change emerges. The researcher, an insider scholar-practitioner, amassed more than 3 500 pages of real-time qualitative data. These were analysed using process coding, to bracket a rich, "thick" narrative. Thereafter, balancing and reinforcing causal feedback loops were identified using system dynamics techniques. Insights based in cognitive dissonance and organisation complexity theories served as guides to aid interpretation. This provided an abstracted and theoretically meaningful account of a complex organisation change process at the meso level of analysis.

The series of nested causal feedback loops generated from the data provide both illustration and explanation of how and why coalitions form, how conflict, trust and commitment emerge and how phases of change evolve. The dynamic process model thus produced provides richly-textured theoretical insights into the complexity of organisation change and testifies to the importance of socio-psychological theories as aids in understanding change.

The research findings also suggest practical tools for use in the process management of organisation change. This includes, in particular, the abstracted process themes, as recognition devices (conversational cues), for use by practitioners as aids to recognise and understand behaviours accompanying micro-level processes. In addition, appropriate response tactics are suggested, drawing on identified complex change management skills and processes. The advances in meso-level organisation change theory suggested by this research make a small but innovative contribution in service of action.

Declaration

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

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PART I: RESEARCH PROBLEM AND LITERATURE REVIEW

Part 1 situates the problem within the body of knowledge.

It is composed of Chapter 1 the introduction to the research problem, which argues that within the context of large scale transformational change in organisations, the "code of change has not been cracked". A case is made that this is a relevant and important problem for scholars, practitioners and consultants.

Chapter 2 refines the statement of the research problem by critically reviewing the relevant literature over the last 15 years. A systematic review is conducted and six themes are identified that provide novel insight into how and why change happens. Strengths and challenges of the respective approaches are appraised. Gaps that ensuing research must address in order to progress what is presented as the dual challenge (a theoretical and practical challenge) are illuminated.

1. Introduction to the research problem

1.1. Introduction

Despite an intensive Harvard Business School led conference (in 2000) on "cracking the code of change" which attracted some of the best minds (practitioners, consultants and academics) on organisational change, "the code of change had not been broken" (Martin, 2000, p.449). A theory, in service of action to help practitioners in the real world is still missing (Argyris, 2000, Johansson & Heide, 2008). A deeper understanding and critical theoretical appraisal of how and why change is accomplished (Chia, 2014; MacKay & Chia, 2013) - what actually goes on within and between the phases of change – is still elusive (Tsoukas & Chia, 2002).

Recent literature suggests that change has become ubiquitous, necessary and ever more important to organisations (Burgelman & Grove, 2007; Nohria, Joyce, & Roberson, 2003). However, although growing in importance, there are reports of dismal failure rates and a host of accompanying reasons why change fails (Burnes, 2011; McClellan, 2011). On the other hand these reports of high axiomatic failure rates are being seriously questioned (Hughes, 2011).

To add to the confusion, there is a multitude of models, recipes and prescriptions that motivate how managers should plan, approach and implement change (Andrews, McConnell, & Wescott, 2010; Kezar, 2001, 2013; Latta, 2009; Lukka & Partanen, 2014). The real world is complex and plurality of approaches to understanding such complexity must be encouraged (Bouckenooghe, 2010; Van de Ven, 2007). However the lack of an actionable theory that accommodates the dynamism and complexity of change cannot be left unresolved. What is required are specific types of evidence: rich, thick, contextual, empirical data over time that help unravel the dynamics of change (du Gay & Vikkelsø, 2012; Langley, Smallman, Tsoukas & Van de Ven, 2013; Pettigrew, Woodman, & Cameron, 2001).

The following sections situate the problem more explicitly. There are two main sections: the first provides the context and background to the research problem; the second clarifies the research problem and suggests evidence that will help resolve the problem.

1.2. Context for the research problem

The background to the research problem draws attention to five observations. First, change is omnipotent and omnipresent irrespective of the nature of organisation. Change occurs everywhere (du Gay & Vikkelsø, 2012; Whelan-Berry & Somerville, 2010). Second, although change is inescapable, it seems to frustrate and fascinate: practitioners are finding it difficult if not impossible to manage change. Academics are still battling to "get their heads around it". Failure to make change happen is perceived as the norm (Beer & Nohria, 2000; Chia, 2014; Wetzel & Van Gorp, 2014). Third, the models drawn mainly from academia are not helpful. They are criticised for being rigid, simple and linear: they miss what happens on the ground and fail to capture the reality and messiness of change (Gilley, McMillan & Gilley, 2009; Lichtenstein, Uhl-Bien, Marion, Seers, Orton & Schreiber, 2007, MacKay & Chia, 2013). Fourth, the reasons for failure are so many that it creates confusion and anxiety. Both organisational and individual level factors are cited as reasons for failure (Burnes, 2011). Lastly, this background and context present a gloomy picture for scholars and practitioners. This parlous state of knowledge cannot continue. If change is as important and pervasive as claimed, developing a deeper understanding of change and a theory useful to practitioners in the real world is essential.

1.2.1. The universal need for change

The extant literature describes the real need for change by all types of organisations. Teams and organisations face rapid and on-going change like never before (Brunton & Matheny, 2009; Gilley et al., 2009; Kotter, 1995, 2007). There are many macro reasons for this.

First, globalisation has impacted the markets and opportunities for more growth and revenue. As global markets become ever more de-regulated and competitive, the ability to adapt (which often translates into the implementation of new goals and change initiatives) is becoming a requirement for many organisations (Prastacos, Derquist, Spanos, & Wassenhove, 2002, p.55-56). Second, as industries become more competitive, organisational change efforts are more important for organisations' long-term survival (Walker, Armenakis, & Bernerth, 2007).

Third, the increasing turbulence, volatility, complexity and uncertainty of the environment demands improved readiness and responses (Elias, 2009; Higgs & Rowland, 2005; Peccei, Giangreco & Sebastiano, 2011). Klarner and Raisch (2013) recently provide evidence that companies that change regularly outperform those that change only intermittently. This finding prevails under different

internal and external contingencies, and over time. A high pace of change may help overcome organisational inertia (Burgelman & Grove, 2007; Hannan & Freeman, 1984) and build change routines (Cyert & March, 1963; King & Tucci, 2002; Klarner & Raisch, 2013; Nussbaumer & Merkley, 2010). Gilley et al. (2009) motivate that organisations whose leaders support and implement continuous and transformational change remain competitive.

Change is thus seen as constant and the ability to change has become critical for an organisation's survival. No organisation is immune from implementing organisational change in today's dynamic world. This fact of business life has made the success of change initiatives more salient for managers and employees (Armenakis & Harris, 2009, p.127-8; Burnes, 2011). "Managing change is therefore seen as *a*, if not *the*, crucial feature of the business of organising" (du Gay & Vikkelsø, 2012, p.121).

However, as important as the case for change is, the ability to implement change successfully is claimed to be an elusive ideal. The success rate of managed change in the real world is allegedly dismal (Judge & Douglas, 2009; Pasmore, Woodman, & Shan, 2010; Szabla, 2007).

1.2.2. The dismal success rate of change

Empirical evidence strongly suggests that change programmes often fail or make the situation worse. In a study by LaClair and Rao (2002) of 40 major change initiatives, 58% failed and 20% realised a third or less of the expected value. Other studies of change efforts have reported failure rates of 30% to 60% and as high as 80% to 90% (Gilley et al., 2009, p.38).

Similarly as noted by Devos, Beulens, and Bouckenooghe (2007, p.608), Clegg and Walsh (2004) reported on the ineffectiveness of 12 organisational change initiatives applied in 898 manufacturing companies across four countries. The overall rates of success of practices and techniques (e.g., Total Quality Management, integrated computer-based technologies, concurrent engineering) were moderate, with some successes but also high failure rates. "The pattern of reported failure remains consistent as recent statistics derived from a global survey of businesses by two McKinsey consultants reveal that only one-third of organisational change efforts were considered successful by their leaders" (Armenakis & Harris, 2009, p.128).

If failure rates are to be believed, then effective organisational changes are rare and this is an enormous drag on all stakeholders (Kotter, 2008, p.13). However, having reported these dismal success rates, Packard (2013) cautions that it has become axiomatic in the change domain to cite up to 70% of organisational change efforts failing, even though a recent study by Hughes (2011) found no evidence for these common assertions.

Hughes (2011) critically reviewed five separate published instances identifying a 70% organisational change failure rate. In each instance, the review highlights the absence of valid and reliable empirical evidence in support of the espoused 70% failure rate. Inherent failure rates were critically questioned in terms of the ambiguities and context-dependent nature of change, competing perceptions, temporal aspects and measurability. The claims were found wanting.

What is clear is that perceptions of success and failure are linked heavily to whose perspective is being served. Depending on who is asked and what their agendas are, differing change outcomes are suggested. Change assessments and positioned outcomes are thus not value neutral (By, 2010). As Chia and Holt (2009) note, "it appears that: the more directly and deliberately a specific strategic change is single-mindedly sought the more likely it is that such calculated actions eventually work to undermine their own initial successes, often with devastating consequences".

Similarly the very models utilised by practitioners, consultants and academics that suggest how change should happen or be managed are not value free. These models have come under scrutiny for their inability to address the multidimensional and complex nature of change (Balogun, 2006; Kezar, 2001).

The next section draws out more clearly the problems associated with current change models.

1.2.3. Rigid models criticised

Early researchers developed relatively simple change models that emphasised the initial evaluation of an organisation, preparation for change, change actions, and securing change into daily organisational operations and culture.

Lewin (1947) for example, created a classic three-step change model: unfreezing and readying workers and organisations for change; movement and active engagement in change activities and processes; and refreezing new behaviours and procedures into routine organisational practices and culture (Gilley et al., 2009; Walker, et al., 2007).

More recently, researchers have created multistep models of change involving varied organisational dimensions such as culture, leadership, communication, motivation, employee engagement, structure, reward, and teamwork among others (Latta, 2009; Packard, 2013). Models from Nadler and Tushman (1980), Burke and Litwin (1992), Tichy (1983), Judson (1991), Kotter (1995) and Galpin (1996) have been crafted similarly. As an example, the conceptualisations by Kotter (1995, 2007, 2008) include leadership, shared need, guiding coalitions, commitment, communicating, changing structures and empowering others (Gilley et al., 2009).

These models have been criticised for their linear assumptions and rigid steps and inability to account for the complexity of change, as well as for discounting the human factor, and demonstrating bias towards heroic leaders who see people as blocking or resisting change (Ford, Ford & Amelio, 2008; Marion & Uhl-Bien, 2001; Schneider & Somers, 2006; Szabla, 2007).

In summary simple mechanistic models have not provided deeper understanding of the complexity of change (how interactions occur, how and why actions are taken, why ideas are not accepted, etc.). These deficiencies could be read as contributing indirectly to the perceived change failures. A deeper understanding of the causes for perceived success or failure (through for e.g., understanding micro-level conversations and meaning-making by all involved) is seen as imperative (Di Virgilio & Ludema, 2009; Vakola, 2010; Wren & Dulewicz, 2005).

1.2.4. Unpacking the sources of perceived failure

Many researchers have taken the alleged dismal failure rate of change as the starting point for attempts to unpack the causes of these failures. Some researchers suggest that failure needs to be considered at two levels: strategy formulation and/or implementation (Fiedler, 2010).

Suggested sources of failure at the strategy formulation level include distorted perception, interpretation barriers and vague strategic priorities, low motivation (which includes reluctance to incur the direct costs of change), cannibalisation costs, cross-subsidy comforts, and past failures which create pessimism about future changes.

Other sources of failure include attempting change in a fast-moving and complex environment, reactive mindsets, ambiguities, anxieties, the belief that obstacles are inevitable and inadequate strategic vision or lack of commitment from top management (del Val & Fuentes, 2003; Kiefer, 2005).

At the implementation level, the list grows to include political and cultural deadlocks around change (such as departmental politics, incommensurable beliefs and definitive disagreement among groups about the nature of the problem and its consequent alternative solutions). At this level, additional sources of failure could include a capabilities gap, cynicism, leadership inaction and embedded routines (del Val & Fuentes, 2003; McClellan, 2011).

Because so many factors exist that could contribute to failure, this intensifies anxiety that change is frustrating and unnatural and demands active intervention (Chia, 2014). The anxiety grows as researchers move beyond macro-level factors such as culture, values and capabilities (e.g., Brännmark & Benn, 2012; Canato, Ravasi, & Phillips, 2013) to consider micro-level factors (e.g. Carlopi & Harvey, 2012; Vakola, Tsaousis, Nikolaou, 2004).

1.2.5. Importance of micro-level factors

Devos et al. (2007, p.608) note that the continued high failure rate of change projects has led some researchers to explore factors other than organisational and system-level variables as equally important in establishing successful change.

They go on to argue that an alternative micro-level perspective may offer more insight. More may be revealed by examining the individuals within the organisations and the psychological factors influencing change efforts (Kavanagh & Ashkanasy, 2006; Wanberg & Banas, 2000). Changes in structures, hierarchy, reward systems, and technology are mediated through individual change. From this perspective, many change efforts fail because the people implementing the changes underestimate the importance of this individual, cognitive–affective aspect of organisational change (Bouckenooghe, 2010; Kavanagh & Ashkanasy, 2006).

1.2.6. Deeper understanding of change required

Some scholars take this further and indicate that to truly understand change, deciphering how interactions at the individual, dyad and group levels influence choices and decisions over time is crucial (e.g., Uhl-Bien & Marion, 2009).

Rather than focusing on perceived outcomes such as the success or failure of change, a richer understanding of change requires a deeper process-oriented (event by event) understanding of how and why change emerges (Chia, 2014; Langley et al., 2013, Tsoukas & Chia, 2002).

Preoccupation with failure and success dilutes attention to the dynamics at play. It reduces the ability to better understand change by understanding - for example - the impact of chance, choices and unintended consequences (MacKay & Chia, 2013).

The above sections provide context for the research problem, which is explicated in the next section.

1.3. Research Problem

1.3.1. The code of change has not been deciphered

The above indicates why, although change is ubiquitous and there is a rich line of studies on change, research has still not been able to crack or decipher the code of change. There is a disjuncture between models, theory and what is happening on the ground. This disjuncture is apparent in the multiplicity of simplistic models, frustration to grasp the nature of change and related perceptions of high failure rates.

Beer and Nohria (2000) note that in the words of Allan Leighton from Asda (a large British grocery store chain) no-one has been able to describe how to manage people to create change.

> It's the bit that nobody understands, it's very difficult to teach, it's all in the people, it's absolutely all in the people. And nobody yet I have come across has even been able to get to the bottom of this. And certainly you have not been able to get to the bottom of it, to teach people how to get people to do things for them willingly, and well who are just ordinary people. And that is the code to crack. (p. 172)

This comment illuminates how practitioners as well as scholars are aware of the lack of a deep and detailed understanding of the processes of change. We do not understand yet, how change actually happens - there is paucity of knowledge of how and why change emerges (Beer & Nohria, 2000). While change models exist, some are too simplistic and others – although surfacing the dynamics of change - still only describe change at the macro or meta-level (for example Van de Ven & Poole,1995).

Existing process models have so far been unable to explain the micro-level processes of change and how they impact at the macro-level.

As noted by Tsoukas and Chia (2002):

> We simply do not know enough about how change is actually accomplished. Even if we can explain, *ex post facto*, how and why organisation A moved from archetype X to archetype Y, or from position A to position B, our explanation would look like a "post-mortem dissection"; it would not be fine-grained enough to show how change was actually accomplished on the ground, how plans were translated into action and, by so doing, how they got modified, adapted, and changed. (p. 568)

Tsoukas and Chia go on to point out that "if organisational change is viewed as a *fait accompli*, its dynamic, unfolding, emergent qualities (in short: its potential) are devalued, even lost from view". A deeper understanding, though, must also include an understanding that change outcomes are mediated by people and change can never be value-free (By, 2010; Maitlis & Sonenshein, 2010). Leaders can be crucial to the success of change as they play an important role in positioning, selling and making sense of change, as well as committing the resources needed for change to succeed (Battilana, Gilmartin, Sengul, Pache, & Alexander 2010; Caldwell, Chatman, O Reilly, Ormiston, & Lapiz, 2008; Gilley et al., 2009). On the other hand, By (2010) draws out leaders possible hidden needs and motives:

> On the other hand, change initiatives are all too often designed, initiated and implemented in order to secure some vested interest: to keep or increase one's own power, status, privileges and prerogatives; to reduce those of others; and to pursue one's own career perspectives at the expense of others' legitimate interests or well-being. (p. 1)

A richer understanding of change must therefore include an understanding of the political, personal and organisational context for that change. Further, deeper insights into the interactions/engagements and influence over time between actors must be drawn out, in order to unpack the dynamics of change (Pettigrew et al., 2001; Uhl-Bien, Marion, &, McKelvey, 2007).

1.3.2. Evidence that will unravel the code

To achieve this deeper understanding, scholars have repeatedly suggested that paired longitudinal studies of perceived success and failure are required. Linking process to outcomes in the context of managerial purpose and intention is important for developing a theory of change with predictive power. Further if these rich case studies can be gathered in different contexts (industries, nations, organisational histories) and different levels of urgency to change, this will serve as the starting point for mapping the conditions for success and failure (Beer & Nohria, 2000; Pettigrew et al., 2001).

1.4. Summary of the research problem

In summary:

- Change is seen as a necessary condition for organisations to survive and remain competitive (Klarner & Raisch, 2013). No organisation is immune to change (Armenakis & Harris, 2009).

- Accomplishing planned change appears to be both extremely difficult and mysterious. Even leading scholars struggle to provide answers: practicable theories in service of action are missing (Argyris, 2000).

- There is no shortage of recipes, models and prescriptions for managers. The models, however, predominantly fail to address the complexity of change (Pettigrew et al., 2001; Uhl-Bien & Marion, 2009).

- Models are often biased towards viewing and addressing change exclusively as a set of actions planned by top management, with outcomes assessed from this biased perspective (Ford & Ford, 2010; Ford et al., 2008).

- This provides one important explanation for the plethora of claims of disproportionate failure rates (Hughes, 2011; Packard, 2013). Managers do not have a code of change: a set of principles explaining how change comes about; a canon elucidating requisite behaviours that can lead to different outcomes; a practical tool that helps make sense of what is going on during interactions, at the coal-face. They thus typically omit processes and interactions from their assessment of failure.

- To crack the code and assist practitioners by offering an actionable theory, a more nuanced understanding of how and why change happens is required. The intentions, influencing behaviours, arguments, disagreements and politicking must be brought sharply into focus. The very interactions that lead to different choices over time must be well understood if there is to be a better understanding of organisation change. Building this deeper theoretical understanding of change processes, together with the required practical skills and behaviours, is termed the "dual challenge". It represents both a theoretical and practical void requiring scholarly attention.

Compelled by the words of Tsoukas and Chia (2002, p. 571) - *"only by placing ourselves at the centre of an unfolding phenomenon can we hope to know it from within",* a systematic literature review is conducted (in Chapter 2) to critically appraise the advancement of the dual challenge within the body of knowledge. First the structure of the overall thesis is presented.

1.5.   Structure of the thesis

The thesis is structured in three parts.

Part One: Situating the research problem within the current body of knowledge

- **Chapter 1: Introduction to the research problem:** presents the research problem as a missing actionable change theory in use. The case is made that the dual challenge has to be addressed to advance change theory and practice.

- **Chapter 2: Literature review:** critically appraises the current body of knowledge, challenges the assumptions that underlie existing theory and draws out gaps to be addressed.

Part Two: Research questions, design and methodology

- **Chapter 3: Research questions:** presents the research question. The main research question is intentionally broad at the outset, allowing for iterative refinement as the data accumulates and analysis progresses.

- **Chapter 4: Design:** motivates from an "interpretivist" perspective a real-time, longitudinal, ideographic, single-case design, based on the research question and logics of the design.

- **Chapter 5: Methodology and methods:** defends a qualitative approach. A descriptive strategy and the causal loop method are positioned.

Part Three: Narrative, formal analysis, discussion and conclusion

- **Chapter 6: Narrative:** presents a rich, thick description of the case using a temporal bracketing and visual mapping strategy.

- **Chapter 7: Formal analysis:** presents a causal chain of evidence and meso-level theory, constructed through causal loop diagrams and codeweaving methods. The theory-building rises in levels of abstraction by utilising a synthetic strategy (Pettigrew, 2012).

- **Chapter 8: Discussion:** highlights the theoretical contribution of the research by addressing seven specific gaps identified in the literature review. Additional theoretical contributions are also clairifed.

- **Chapter 9: Conclusion:** presents the code of change and motivates contribution of the thesis from a theoretical, methodological, empirical and practical perspective.

2. Literature Review

2.1. Introduction

Chapter 1 highlights the claim that not enough is known *theoretically* about how change happens (Tsoukas & Chia, 2002) and a *pragmatic* understanding of the skills and behaviours to make change happen remains underspecified (Beer & Nohria, 2000). Chapter 2 critically assesses the claims drawn from these two seminal articles by systematically reviewing the subsequent body of knowledge over the last 15 years (Wolfswinkel, Furtmueller & Wilderom, 2013).

The literature review is structured as follows:

- First, the literature review methodology is presented. It provides transparency and insight into how papers were identified, reviewed and selected, necessary when conducting a systematic literature review (as opposed to a traditional review).

- Second, a broad overview of major observations is presented, with the goal of orienting the reader, given the high volume of papers systematically reviewed. The quality and relevance of the 105 papers selected are appraised. The main findings summarise six themes identified. The themes represent contemporary theoretical approaches explaining *how and why change happens*.

- Third, the six themes are individually analysed. The strengths of the respective themes, including weaknesses (problems and gaps) that lay the foundation for ensuing research are appraised.

- Lastly, reflections on the terrain for subsequent research are presented. The theoretical, methodological and empirical gaps aim to lay a robust foundation for subsequent research.

2.2. Literature review methodology

To develop a grasp of how research and theory have advanced over the last 15 years since the observations of the dual challenge, iterative searches via the academic database ABI/Inform Global (ProQuest) were conducted. Searching the database by using "organization" and "change" across all search categories produced 6.9 million hits. Such a feast of papers was encouraging, but reviewing so many would be impractical. A refined search, limiting the timespan to the years 2000-2014 and with "organization" or "change" in title and abstract and "how change happens" in the text, produced 2 043 hits.

Although much lower than the initial searches, the volume was still greater than what is recommended as manageable for a doctoral literature review (Cronin, Ryan, & Coughlan, 2008). It became clear that a systematic review of the literature must be designed. A systematic review, as noted by Wolfswinkel et al. (2013) employs a more rigorous and well-defined approach to reviewing the literature in a specific subject area.

The titles and abstracts of the 2043 articles were read closely. The researcher then decided to restrict the search criteria to subsequent publications that cited the two seminal papers. It became clear after this close reading that any article seriously addressing the dual challenge would be highly likely to cite those papers. To enable a practical yet methodical review of relevant articles related to the dual challenge, subsequent articles citing either or both Beer and Nohria (2000) or Tsoukas and Chia (2002) were reviewed.

A total of 659 article titles and abstracts were assessed to determine which of the articles related most relevantly to the dual challenge. Based on this assessment, 154 full articles were then reviewed individually, in depth. One hundred and five articles were eventually selected for critical analysis (based on their fit in addressing the dual challenge). The other 49 papers did not attend to the dual challenge, focusing on neither a *theoretical advancement* of how change happens nor an enhanced *pragmatic* understanding of change.

Although this approach to the literature review represents a systematic approach, it does entail one main limitation. Granting the selection extends over 15 years, articles were selected based on papers that cited either or both of the two seminal articles. Other themes (covered in 2.4 -2.10) may have arisen from a different selection. The next section presents a broad overview of the papers reviewed.

2.3.   Literature review overview

This section presents a descriptive overview of the papers reviewed to orientate the reader and give a sense of the 105 articles.

First the quality and relevance of the selected articles is defended. This is important as any robust appraisal of the progress on the dual challenge hinges on the quality and relevance of the selected articles.

Next, the main themes "teased out" from the collective review of 105 articles are highlighted. The themes represent contemporary *theoretic perspectives* to understanding how and why change happens. Unlike a general literature survey, the intent of the systematic review is to appraise the claims, strengths and shortcomings of the various and sometimes competing theoretical approaches, using a robust and consistent assessment frame, with a view to determining the most promising route forward for the present research in order to address the dual challenge.

2.3.1. Quality and relevance of selected articles

This section summarises the quality and relevance of the articles selected for review. The profile of journals and categorisation of articles provides insight into the quality of selection. Table 2.1 provides the number of articles from journals ranked in descending order according to ratings.

Table 2.1.   *Number of articles per journal ranked by rating*

Journal Name	Rating of Journal					Total of Articles per Journal
	A*	A	B	C	NA	
Journal of Change Management				21		21
Journal of Organizational Change Management			8			8
Scandinavian Journal of Management			6			6
The Journal of Applied Behavioral Science			6			6
Organization Studies	4					4
Human Relations	4					4
Academy of Management Journal	4					4
Leadership & Organization Development Journal			4			4
Organization		3				3
Organization Science	3					3
Journal of Management Studies	3					3
Journal of Organizational Change Management			2			2
Academy of Management Review	2					2
Academy of Management Annals	2					2
Journal of Management and Organization			2			2
Management Decision		1				1
Strategic Advanced Management Journal					1	1
Industrial Marketing Management	1					1
Journal of Advanced Nursing					1	1
The Journal of Psychology				1		1
Journal of Business and Behavioral Sciences					1	1
Organization Development Journal				1		1
Journal of Business Ethics		1				1
International Journal of Business Administration					1	1
Journal of Business Psychology					1	1
Systems					1	1

Journal	C1	C2	C3	C4	C5	Total
British Journal of Management		1				1
International Journal of Organizational Analysis			1			1
The Leadership Quarterly	1					1
Group & Organization Management		1				1
Work & Stress: An International Journal of Work, Health & Organisations		1				1
Academy of Management Journal	1					1
Chinese Business Review				1		1
Public Administration		1				1
Journal of Managerial Psychology				1		1
Scandinavian Journal of Management			1			1
Journal of Organizational Behavior	1					1
Strategic Management Journal	1					1
Communication Monographs		1				1
International Journal of Management				1		1
Corporate Communications: An International Journal			1			1
The Leadership Quarterly	1					1
European Management Journal			1			1
Long Range Planning		1				1
Academy of Management Learning and Education	1					1
Journal of Management Policy and Practice					1	1
Grand Total	**29**	**11**	**32**	**25**	**8**	**105**

Three general observations are made based on the articles selected for review.

- First, the articles are spread across 47 journals, demonstrating that articles reviewed were not selected only from a narrow range of journals, which might entail bias in terms of those journals' preference for a particular style or approach.

- Second, the articles appear in respected peer reviewed journals. A staggering 97 articles (92%) appear in accredited peer reviewed journals recognised within the ABDC Journal Quality List 2013. A total of 72 out of 105 articles (69%) appear in journals that are highly rated (A*, A and B rated journals).

- Lastly and unsurprisingly, 74 out of 105 (70%) of articles appear in the top 15 most published-in journals within this review. From the top 15 journals, 7 of the journals are ranked as A*, 1 is ranked an A, 6 B and 1 ranked C. The selection of articles could thus be considered to be of high quality and standard.

Next, Table 2.2 summarises the articles selected for review by type or emphasis.

Table 2.2.   *Summary of emphasis of articles reviewed*

Type of article	
Conceptual	47
Empirical	52
Methodological	1
State of science	5
Grand Total	**105**

Of the total of 105 papers, there was a good balance between studies that were purely conceptual or theoretical and those that were empirical. This provides a good basis for assessing both theoretical approaches and actual empirical findings.

Only one paper explicitly focused on the methods used to develop theory. Sandberg and Alvesson (2011) argue that in developing theory, most scholars prefer to find gaps in the current theory rather than adopting assumption-challenging approaches (what they refer to as *"problematization"*).

They argue that a more fruitful manner to advance theory is to challenge underlying ontological assumptions rather than merely extending theory by finding gaps in current theorising. Researchers though are scared to "rock-the-boat" by challenging theory and therefore settle for "gap-spotting". This may be the reason why change studies are sometimes perceived as repetitive and dull. Wetzel and Van Gorp (2014) play on a sexual metaphor and point out that change research should be stimulating but sways towards boredom. This review suggests that a combination of the two approaches (i.e., problematization and gap-spotting) could be fruitful for advancing theory. At this stage, no further appraisal is made with respect to the conceptual and empirical papers in the review as this will be thoroughly assessed in 2.4 to 2.10.

Of the 105 articles, 5 are state of the science reviews. The approaches in these reviews were diverse and added value in understanding differing perspectives. As an example By (2005) provides a critical review of some of the main theories and approaches to organisational change management and suggests a new framework. His framework, however, aligns with a classification approach to progressing change knowledge and does not advance knowledge related to the dual challenge. Moving beyond taxonomising is important if change theory is to be advanced.

Bouckenooghe (2010) on the other hand provides an in-depth review of the attitude-to-change construct. For researchers interested in variance logic theorising, the review provides an excellent synthesis of various attitude-related constructs. Once again though, the review is unrelated to advancing the dual challenge. In complete contrast, Barends, Janssen, ten Have and ten Have (2014) appraise the type of evidence accrued from empirical studies over 30 years, using a four-level framework. After reviewing a total of 563 studies their assessment shows a predominance of one-shot studies with a low internal validity. Replication studies are rare. Their findings suggest that scholars and practitioners should be sceptical about the body of knowledge in the field of organisational change management published to date.

Beer (2014) though provides a balanced and sobering critique of these researchers' findings and conclusions. He raises the importance of acknowledging the practical challenges researchers face in producing knowledge (e.g., access to data or practical considerations such as running experimental designs in the field). Beer (2014) encourages more complex thinking and tactfully draws attention to the methodological issues in the selection of articles and associated limitations from the researchers' study. The practicalities that limit movement up the four level classification framework are raised and suggestions for addressing improvements to research are then made. Arresting the complexity within context is important to progress change theory.

The main point emerging from the respective state of the science reviews is that because of their variety they provide further insight into the type of arguments and frustrations observed from research in the field of change: complaints of boredom; repetitive stating of similar assumptions (e.g., change failure rates are high); and concerns about the quality of evidence over the last 30 years. This in turn provides insight into some of the gaps this review will explore.

Shifting attention to the type of empirical studies conducted assesses whether similar observations by Barends et al. (2014) were drawn out in the review. Table 2.3 highlights the respective empirical designs and approaches.

Table 2.3.   *Summary of design logics and approaches*

Research Approach	Qualitative			Quantitative	
Design Logic	Ethnographic	Multiple cases	Single cases		Total
Process Logic	**7**	**8**	**29**		**44**
Real time	5		4		9
Real time & retrospective			6		6
Retrospective	2	8	19		29
Variance logic				**7**	**7**
Quantitative methods				7	7
Grand Total	**7**	**8**	**29**	**7**	**51**

Supporting the observations of Barends et al., (2014), 29 out of 44 (66%) of the qualitative studies utilised a single case study design. As Beer (2014) points out, this is to be expected as researchers attempt to understand complex phenomena over long periods of time and within context. Gibbert and Ruigrok (2010) advocate giving internal validity preference traded-off against external validity, which promotes replication logic.

Lastly, 9 out of 44 (20%) studies were real-time studies. However, even this small number does not provide a proper reflection of the paucity of real-time studies. In many cases, data were collected – but often not analysed – over time. For example, Jian (2011) intentionally selected events rather than focusing on the entire data set to home in on specific interactional data. Many studies (75%) preferred a retrospective design with the primary default method as retrospective interviews. Brown, Stacey and Nandhakumar (2008) argue that this may be problematic as people are known to be often motivated to provide responses that benefit themselves. Unsurprisingly, given the focus of the two seminal papers, only seven articles related to variance logic design. This provides additional vindication for the selection criteria on which the literature review was based; most studies related to advancing understanding of how and why change happens.

In summary the majority of studies (75%) included in the review were conducted in the last seven years. The arguments, conceptualisations and findings are thus up-to-date and relevant. The bulk of the papers come from the most highly rated journals.

The main finding is that single case, retrospective designs are preferred. This may be so because researchers strive to understand how change is accomplished within context and over longer periods of time (Beer, 2014). Lastly, as will be further demonstrated, research is "alive and kicking" in terms of longitudinal studies desiring to gain a better grasp of how change happens.

The evidence suggests that a better process understanding is being pursued. However a practical understanding of the code of change (e.g., the types of skills, attitudes and behaviours) remains potentially underspecified. This is appraised further in the review.

2.3.2. Themes surfaced

The foregoing descriptive overview gives a sense of the thorough review of each of the papers. Through an iterative and recursive process of reflection on each paper and attempts to mine the various perspectives and concepts used, each paper was categorised to reflect a particular theme.

From all of this and from a broader reading of other papers – including some of the references cited in the 105 papers or subsequent papers citing the 105 papers – six distinct approaches were identified that respond to developing a better understanding of the dual challenge. These approaches are captured as themes. The papers clustered under each theme are reviewed next to draw information about research conducted to date.

Each theme presents a unique perspective on how and why change happens. The plurality of perspectives provides rich understanding of how change is potentially accomplished and offers the opportunity to reflect critically on the strengths and weaknesses (problems/gaps) of each perspective.

The themes, however, are not mutually exclusive. Some themes overlap with others. Yet the perspective underlying each theme offers a novel view and is thus isolated as a theme, in its own right.

Table 2.4 presents a summary of the different approaches, the overarching themes and sample of representative papers related to each theme.

Table 2.4.   *Approaches and Themes Identified from Review*

6 Approaches	Overarching Theme	Representative papers
Storytelling and narratives	Change-through-storytelling: *Change occurs with alterations in the stories that people tell*	• Brown and Humphreys (2003) • Beech and Johnson (2005) • Jian (2011) • Näslund and Pemer (2012) • Dawson and Mclean (2013)
Discourses	Change-through-talk-in-interaction (discourses): *Change happens when one way of talking replaces another way of talking*	• Hardy, Lawrence and Grant (2005) • Anderson (2005) • McClellan (2011) • Preget (2013) • Doolan, Grant and Thomas (2013)
Cognitive approach - schema change	Change-through-schema-alteration (shifts-in-beliefs): *Change happens through shifts in mental models*	• Kuhn and Corman (2003) • Balogun and Johnson (2005) • Nielsen and Abildgaard (2013) • Guiette and Vandenbempt (2013) • Gondo, Patterson, and Palacios (2013)
Sensemaking and sensegiving	Change-through-sensemaking and sensegiving: *Change happens as actors make and give sense to ambiguous, uncertain and surprising events*	• Weick, Sutcliffe and Obstfeld (2005) • Brown, Stacey and Nandhakumar (2008) • Werkman (2010) • Weick (2012) • Maitlis and Christianson (2014)
Routines and practices	Change–through-routines (shifts-in-practices): *Change happens as daily routines and practices evolve*	• Feldman (2004) • Ford (2006) • Rerup and Feldman (2011) • Smets, Morris and Greenwood (2012) • Jansson (2013)
Complexity	Change-through-complexity (through-non-linear dynamics): *Change happens through dynamic interactions and shifts through underlying processes (mechanisms)*	• Styrhe (2002) • Ford (2008) • Burnes (2004) • Uhl-Bien and Marion (2009) • Wells and McLean (2013)

2.4 Theme 1: Stories and Narratives

The first theme identified is approaching and understanding change through the lens of stories and narratives: *change-through-storytelling*. Inspired to dig deeper and unravel the finer micro-level nuances, some researchers have turned to stories and narratives to detail what happens at the coal-face and this is a prominent approach in the papers reviewed (Dawson, Farmer & Thomson, 2011). Through micro-level detail stories lay the foundation for identifying processes of change.

2.4.1. Distinguishing stories from narratives

Although some scholars assert that the concepts of stories and narratives are closely aligned (Rhodes & Brown, 2005), there is contention in the literature regarding what is meant by a story and whether and how this differs from a narrative. Some scholars, for example Barry and Elmes (1997), use the terms synonymously but maintain preference for thematic, sequenced accounts of stories/narratives. Similarly Czarniawska (1998, p. 2) notes that "a narrative, in its most basic form, requires at least three elements: an original state of affairs, an action or an event, and the consequent state of affairs", along with a plot line and a set of actors/characters that brings these elements into a meaningful whole (Maynard-Moody & Musheno, 2006).

This aligns with Gabriel's (2000) distinction of story from narrative: the latter must demonstrate coherence and sequencing through a clear, beginning, middle and end. Dawson and McLean (2013) add that narratives must reduce complexity, ambiguity and uncertainty - the "equivocality of organisational life" (Brown & Kreps, 1993, p. 48).

Narratives thus serve as organising devices (Tsoukas & Hatch, 2001), instil meaning and connection to event sequences (Dawson & Buchanan, 2005), draw attention to focal actors (Buchanan & Dawson, 2007) and can also be theory-laden by providing causal explanations through the linkage of events - *this happened because we did this which resulted in this* (Dawson & McLean, 2013). Although narratives may represent an orienting and ordering mechanism, Dawson and McLean (2013) caution that they may inadvertently construct a linear account of change that underplays the fluid, multi-voiced, unfolding dynamic of change (Cunliffe, Luhman, & Boje, 2004).

In contrast and in seeking to set stories "free from a narrative prison" (Boje, 2006; Dawson & McLean, 2013), other scholars such as Boje (1995, 2001, 2008) see stories as more disjointed, fragmented and as unfinalised accounts of what is happening.

Multiple stories are fashioned by different storytellers, for varying audiences, in different contexts over time (Dawson & Buchanan, 2005). They can be constructed on a continuous basis, represent the beliefs and values of the storytellers, and may be partial or incomplete. There is therefore no single accurate account of what is going on but rather multiple "truths" by differing actors grappling with uncertainty, ambiguity and tension, resulting in highly charged accounts of reality (Buchanan & Dawson, 2007). Stories compete with each other for prominence and often serve to discredit other world-views (Gabriel, 2000). People don't just talk, they tell stories which help them structure experience (Johansson & Heide, 2008). Storytellers seek to engage, influence and entice audiences with interpretations that they propose are the facts of the case (Denning, 2005, Dawson et al., 2011).

Scholars such as Näslund and Pemer (2012) and Dawson and McLean (2013) thus follow Boje's definition of story as being "an exchange between two or more persons during which a past or anticipated experience [is] being referenced, recounted, interpreted or challenged" (Boje, 1991, p.8). Notably, the definition reduces the burden for stories to be complete, capturing full plot lines or sagas, or be accepted by majority of actors. With stories, one is likely to find a situation of polyphony; disagreement as to what constitutes credibility and plot lines that will be more convoluted than romantic and epic forms (Beech & Johnson, 2005).

It would appear on the basis of the studies reviewed that stories and narratives draw out different aspects, which in both cases have potential to create deeper insight into the processes of change. In sum, the storytelling approach benefits from being sceptical about monological, single accounts of truth claimed to be provided by unbiased, objective researchers (Dawson & Buchanan, 2005). In essence stories seek for polyvocal, fragmented accounts that perhaps drown out less powerful voices (Buchanan & Dawson, 2007). On the other hand the narrative approach seeks causality.

The power of narratives lies in the ability to rise above incidents and stories (embedded in the surface level of words, comments, perceptions and sentiments of actors) to the level of events (akin to rising above indicators in variance logic to 1st order and 2nd order constructs) in order to achieve conceptual abstraction and promote theory-building (Langley, 1999; Pentland, 1999). There is a linear conception of time that links antecedent(s) with agency (a sequence of actions or events) that leads to outcomes (a consequent state of affairs) (Dawson & McLean, 2013).

Stories and narratives share numerous strengths, as noted in the next section. By combining the strengths of both approaches and addressing current limitations, stories and narratives have the potential to progress the dual challenge.

The next section considers the strengths of the storytelling and narrative approaches as well as the limitations and gaps of the approach by referring to the empirical studies reviewed.

2.4.2. Strengths and weaknesses of the storytelling approach

Five main strengths have been identified in the review of the storytelling and narrative approaches.

Stories and narratives magnify the micro-level detail over time

As noted, Tsoukas and Chia (2002) raise the importance of understanding what goes on at the micro-level in order to advance knowledge about what happens within the phases of change. By focusing on the actual words, expressions and communication of actors, stories and narratives naturally focus on the micro-level. The inclusion of a more micro-level of analysis incorporates the "lived experience" of actors (Samra-Fredricks, 2003) and develops a fuller understanding of the dynamics of change (Beech & Johnson, 2005). Many of the empirical papers reviewed show how stories draw out detail at the micro-level over time. This is important for advancement of theory.

Beech and Johnson (2005) explore identity dynamics in their review of changes of top management. They find for example, through detailed observations that individuals' identities are disrupted over time and are not stable as suggested by social identity theory. Stories and narratives can serve as relevant mechanisms for challenging existing theories. Although Beech and Johnson (2005) do not foreground change in their study (which had the potential to present valuable insight into change processes – for e.g., the processes of mobilising the exit of powerful executive actors), the micro-level details are revealing. The behind the scenes (backstage effects) usually missing from research are surfaced and present an understanding of why stories may lack coherence with classic plots and story lines. For instance background effects are revealed in their case as the CEO shares his frustrations in one-on-one sessions with the researchers.

Stories thus reveal micro-details of what actors are actually thinking or feeling. Their "true thoughts" are expressed after the fact and behind the scenes. When they are in a perceived "safe space" (e.g., with outsider researchers) they tell their story. This is important to reveal the inside happenings and processes of change.

For an exemplary case of telling one thing in public and another in private see Perlow and Repenning (2009)). Similarly Dawson and McLean (2013) highlight the details of miners concerns and interpretations of a new performance management system implemented in an Australian mining company. The micro-level details expose the thoughts and feelings of actors and illuminate details fundamental for achieving a deeper understanding of what happens at the literal coal-face.

Stories challenge the underlying assumption of single accounts of truths or single realities

The second main benefit of stories is that they align with a social constructionist perspective of reality. There is no single external objective reality as posited by realist approaches. As noted, stories challenge monological accounts. Dawson and Buchanan (2005) and Buchanan and Dawson (2007) interrogate researchers seeking out the most accurate story ("the way it really happened"). Stories are often told retrospectively, presented in line with how influential organisational actors want to be positioned.

Researchers are therefore sometimes under duress to make sense of disparate accounts and revert simply to triangulating conflicting data out of the way. Seeking out alternative and multiple stories adds richness to analysis and starts to embrace a messy reality (Dawson et al., 2011). Brown and Humphreys (2003) provide an exemplar of change being experienced and expressed very differently by different actors. They show how in a merger of two colleges. Beta and Gamma, amalgamated into Alpha, the senior management team perceived themselves as heroes and relayed en epic tale of change. They were the protagonists who rescued the college and had to make tough calls for the long term survival of all. The staff (lecturers, administrators etc.) on the other hand, relayed a tragic tale and portrayed perspectives of hopelessness and betrayal. The study demonstrates the naiveté of judging change outcomes as success or failure from only some actor's perspective, and highlights the power of stories and narratives in embracing multiple realities.

Dawson et al. (2011) similarly motivate that change comprises multiple and ever-changing stories that emerge, are re-written, compete and variously shape and are shaped by those experiencing change. Their research into change in remote maternity services illustrates how different accounts of the change experience emerge from midwives, managers, local communities, politicians and the media, and how these accounts can shift in meaning and emotionality over time. The researchers thus argue strongly for greater accommodation of polyvocal narratives and – perhaps controversially – question change accounts that present single version of events.

The authors challenge the presentation of the unified and coherent accounts typical of narratives, and argue strongly for the accommodation of multiple stories rather than *the* story of change. This review sees merit in the Dawson et al., (2011) perspective that contradictory evidence should be accommodated and not overlooked. Subsequent research should stress the importance of polyphony (in the voicing of multiple views as well as surfacing of silencing that may occur). The process by which multiple stories emerge, develop, compliment and compete that contributes to the unfolding dynamics of change presents fertile area for work. At the same time, however, it is recognised that merely seeking multiple stories may lead to atheoretical approaches to change. More than this is needed if change theory is to be advanced.

Stories aid in understanding processes of change (such as sensemaking)

A third strength and common sub-theme reflected in the storytelling approach is that stories aid in understanding how sensemaking happens. To make sense and meaning of what may be new, confusing, challenging, different from the norm or different from expectations, participants engage in sensemaking (Weick, 1995). Sensemaking is a natural, intuitive process that involves interpretation and meaning-making as individuals and groups reflect on phenomena (Weick, Sutcliffe & Obstfeld, 2005).

Brown and Humphreys (2003) note that stories play a crucial part in sensemaking by participants, especially when there is high cognitive load caused by complexity, ambiguity and uncertainty (equivocality). Actors cannot stay in this state of conflicting perspectives and stories are used to rationalise what is going on and provide acceptability for organisation change that may otherwise be considered unnecessary or illegitimate.

Stories help organisation members leverage the experience of others, which helps them fill in gaps in their own understandings and sensemaking, providing suggestions for action (Dawson et al., 2011). Brown et al. (2008, p.1038) cite Weick (1995, p.14) and summarise that

> Sensemaking is a search for plausibility and coherence that is reasonable and memorable, which embodies past experience and expectations, and maintains the self while resonating with others. It can be constructed retrospectively yet used prospectively, and captures thoughts and emotions: to engage in sensemaking is to construct, filter, frame, create facticity and render the subjective into something more tangible. (p. 1038)

Storytelling is part of the sensemaking process. Näslund and Pemer (2012) show how storytelling and sensemaking go hand-in-hand. In presenting two cases of large Scandinavian companies experiencing change, stories that align with the dominant stories within the organisation are what are relayed and accepted by organisational members. Using data from the two change projects, they show that in the negotiation of meaning, those stories that display semantic fit with the dominant story are perceived as more convincing, while those stories that lack this attribute appear oxymoronic and fail to have an impact. As a result, the organisation is only able to change in a manner congruent with the dominant story and becomes inert in other respects. The authors suggest that a dominant story fixes not only the meaning of events, but also the meaning of the labels available for sensemaking. By this appropriation of language, the dominant story circumscribes sensemaking and storytelling possibilities, and thereby restricts organisation change.

There is thus evidence that stories are not only "an exchange between two or more persons during which a past or anticipated experience [is] being referenced, recounted, interpreted or challenged" (Boje, 1991, p.8) but the exchange includes matching stories that are acceptable to the parties involved in the exchange (i.e., an assessment of current stories takes place within the context and confines of the dominant story).

Näslund and Pemer (2012) go on to highlight the impact of dominant stories in the case of the Analysis project at Alpha. Against a backdrop of serious predicament – services and products becoming outdated and even loyal customers leaving – the CEO decided to act by analysing all businesses in Alpha, their profitability and growth potential, in order to determine which should be kept and which discarded. This approach sounds reasonable and a sensible course of action. Although senior management were involved, the project faced severe criticism from management, employees and union representatives over time. The CEO and consultants were ultimately forced to leave the company.

Yet interestingly, when the same kind of suggestions were presented in a manner more congruent with the dominant story (that of participative leadership and engagement with all stakeholders) the proposed changes were implemented. In order to make others follow, you have to provide a message they can identify with – which would seem to depend as much on the way the story is told, as on the nature of the proposed course of action (Humphreys, Ucbasaren & Locket, 2012). These are important findings to consider in subsequent research aiming to advance the dual challenge.

In summary, a further strength of the storytelling approach is that stories are a means of better understanding micro-level processes of change such as sensemaking. How individuals and groups convince and persuade each other into adopting particular beliefs and habits of action is made clearer through reviewing the stories they tell and sell. This is crucial in progressing change theory.

Stories raise awareness of issues of power

Fourth, stories are not neutral devices. Each story has the ability to shape and influence interpretation and understanding. They are infused with emotion, with agendas, with ways of seeing the world. They punt a particular version of events or meaning (Dawson & Buchanan, 2005). Stories are reflections of ongoing processes of negotiation and power struggles as individuals and groups seek to gain dominance of their interpretations and accounts. There is a battle for competing voices and perspectives to be heard and in the process some are magnified and others silenced (Buchanan & Dawson, 2007).

Evidence of this is reflected in the cases from Brown and Humphreys (2003), Dawson et al., (2011), Näslund and Pemer (2012) and Dawson and McLean (2013). Each case could easily be portrayed as settings in which individuals and groups compete for power through their stories (Humphreys & Brown, 2002). In the Brown and Humphreys (2003) case, the dominant group is the heroic senior management team. Similarly the dominant group in the Dawson and McLean (2013) case is the bosses of the miners pressing for changes to the performance management system. For miners, the new rating system was viewed as an attack on their collective identity. As such, appraisal reviews were sites of hegemonic struggles stimulating the storying and restorying of miners' tales.

The dominant stories suppress other stories and sensemaking from emerging (Brown & Humphreys, 2003) and from being heard (Foucault, 1977). Stories are influential in raising awareness to issues of power and hegemony. They are a powerful political vehicle in influencing sensemaking and a critical component in maintaining choice and deflecting the imposition of a single simple solution (hegemonic influence) over various interpretations of what are complex context-based issues (Dawson et al., 2011). The storytelling turn thus brings into change theorising what has been critiqued of traditional approaches - where issues of power are not considered.

In conclusion, the storytelling turn offers a credible approach for tackling important aspects of the dual challenge such as magnifying the micro-level details of change, challenging singular accounts of truth, surfacing important sub-processes of change (such as sensemaking) and drawing awareness to issues of power. However the storytelling approach does also present limitations which are important to overcome in order to progress the dual challenge. Based on the papers reviewed, five limitations are identified within the storytelling approach.

Lack of utilisation of existing theory to explain observed phenomena

First, although stories home in on the micro-level of analysis, drawing actual narrations, commentary and thick descriptions from the case/s, only one of the five empirical studies reviewed, that by Brown and Humphreys (2003), refers to micro-level (individual and group level) theory to explain what was observed. Brown and Humphreys (2003) use social identity theory and social categorisation theory to explain the behaviour of both sets of actors (the senior management team).

It would thus appear that whereas stories raise serious awareness of, for example, competing and multiple stories and issues of power and hegemony, more can be done to leverage existing theory to explain observed phenomena. For example, why do actors tell different stories, why do they badmouth other actors as in the cases of the Alpha college senior management team being lambasted by their peers; the administrators in the Scottish case; the case of the streetfighter CEO being badmouthed by one of the senior executives (Benjamin); or the miners cursing the managers in the Australian mineworkers case?

Theory must be able to provide explanations for why these occur, rather than just describing that they do (Sutton & Staw, 1995; Whetten, 1989). The suggestion is for future research to not only search for multiple stories but to enhance this by seeking multiple narratives and then to seek out explanation for these narratives through increasing levels of abstraction based on more analytic strategies - for example those suggested by Langley (1999).

Greater adoption of strong process approach

The second issue is that of identifying the processes of change. Although storytelling deepens understanding of, for example, sensemaking processes and largely embraces an interpretive and micro-level understanding of change; the processes that bring about change remain in the background. Attention is given to the surface level words and their semantics rather than emphasis on processes.

By combining storytelling and narratives with other approaches (for example see Actor Network Theory) they can serve as credible stepping stones to draw out processes that make change happen. Buchanan and Dawson (2007) support this observation. They argue that a narrative approach should be used to inform research designs that adopt a contextual/ processual perspective as this can offer valuable insights in furthering knowledge and understanding of organisational change processes. These findings provide robust pointers towards an approach which uses storytelling as a base for theory-building.

Practical and actionable theory still missing

Third, Argyris (2000) and Martin (2000) both lament that an actionable theory is required if knowledge on change is to progress. Stories are powerful in creating an understanding of what happened over time. On reviewing the select cases presenting the storytelling and narrative approach, what practitioners need to take out from an applied perspective is underspecified. The limited consideration scholarship so far has given to building an actionable theory opens a rich area for work. Actionable theories start making in-roads towards cracking the code of change.

Leaders are sometimes portrayed as dominant actors who must manipulate and control recipients

Fourthly, whereas power and hegemony are brought to attention in this approach, there are sometimes hidden underlying assumptions on the role actors' play. For example, Brown and Humphreys (2003) conclude that:

> Successful leadership of change fundamentally requires the moulding and manipulating of people's understandings rather than of material things. In particular, our article suggests that senior managers need to work at providing other groups with a narrative that contains explanations for current events and future projections. These accounts need to both serve the needs of management and be sufficiently plausible for others such that they do not feel motivated to question them. […] There are, as yet, few general prescriptions for senior managers regarding precisely how they can impose their hegemony most effectively. (p. 139)

It is questionable whether leaders should be conceived as manipulating or imposing their hegemony. Evidence from the storytelling approach (Dawson & McLean, 2013) demonstrates what happens when leaders impose ideas through hegemony. Actors do not buy-in to new ideas and tell tragic stories of managers as villains.

Few practical prescriptions for managers exist for how to approach change from a storytelling approach, but where they do, they are not necessarily related to manipulation or control by hierarchical leaders. In stark contrast, the Balogun and Johnson (2005) study demonstrates the power of sensemaking through storytelling within the informal network. In order to crack the code, the type of skills, behaviours and approaches must be underpinned by credible leadership theories.

Underutilisation of real-time studies in the storytelling approach

Fifth, of the five empirical papers reviewed, only one represented a real-time study of change, that of Dawson and McLean (2013). There is clear preference for retrospective studies (although some real-time data is captured sporadically). This may be because "pure" real-time longitudinal studies are probably not practical or feasible. Brown et al. (2008) surface the concern around retrospective accounts where individuals filter, edit and re-sort experiences into sequences based on hindsight, which can result in notable disagreements. In recounting experiences organisational actors have considerable latitude, and are strategically motivated, to determine their own highly personal interpretations of what has occurred. More real-time studies that can arrest stories-in-action, including backstage effects, where possible, are needed.

2.4.3. Conclusion to the storytelling and narrative approach

Stories and narrative are powerful mechanisms that can aid in the better understanding of change. In the words of Brown and Humphreys (2003, p.139) "change occurs with alterations in the stories that people tell, and it is these stories that demand increased attention from scholars". This review supports the greater attention to "storying". Single accounts of the way it really happened must be avoided.

Rather, multiple stories and narratives should be pursued. In order to advance the dual challenge, theories in service of action should be followed, rather than just multiple, descriptive accounts of competing stories. Narratives have the potential of preventing atheortical descriptive accounts. More real-time studies, in search of the processes making change happen, still need attention. Issues of power, silenced voices and backstage effects should be sought as processes unfold. These findings provide strong pointers towards an approach which can utilise narratives as a solid foundation to building change theory.

2.5.   Theme 2: Discursive approaches

The second theme identified is that of approaching and understanding change through the lens of changing discourses.

2.5.1.   Defining discursive approach

For a long period, the literature on organisation and change has emphasised a rational, mechanistic and teleological understanding of these phenomena (Durand & Calori, 2006; Kotter, 2007; Nyberg & Mueller, 2009). In line with this approach the change cotent is assumed to be definable and knowable in advance. Change is seen as an antecedent intervention, planned beforehand by top management or leaders (Andrews et al., 2010), executed and then achieved at another point. This happens through clearly defined parameters, and in stages (Doolin, Grant & Thomas, 2013).

Organisational actors who oppose the change are seen as trouble makers, resistors or as "unreasonable" or "screwing up" (Ford et al., 2008,). Scholars dissatisfied that this approach enhances understanding of change have challenged traditional perspectives (Anderson, 2005; Ezzamel & Willmott, 2008; Laine & Vaara, 2007) and have adopted a discursive turn to better understanding how change happens and why change is perceived to fail (Ford, 2005; McClellan, 2011; Preget, 2013).

Although it bears some resemblance to the story-telling approach, this discursive turn is different. The story-telling approach homes in on exchanges by actors, usually representing retrospective accounts of experiences in the form of stories (e.g. the epic and tragic tales of Brown and Humphreys (2003)), or 'villains' and victims' in tales of oppression (e.g., Näslund and Pemer (2012) and Dawson and Maclean (2013)). Discourses, by contrast, focus on actual texts (e.g., written works or speech acts).

The discursive approach deals more effectively with the real-time *in situ* conversations (Preget, 2013). Whilst the focus of stories is on storytelling, linking actors to intentions and resultant interpretations and emotions, that is, the pulling together of plot-lines – however fragmented - in discourse analysis the focus is on the language used during engagements, and on understanding how meaning emerges through translation (Gabriel, 2000; Doolin et al., 2013). This is important as it captures actors' interaction and meaning-making *in flight*.

Nyberg and Mueller (2009) in citing Grant, Hardy, Oswick and Putnam (2004, p. 3) refer to the term "discourse" as a an ordered, although not necessarily coherent, collection of texts (includes written works, speech acts and non-linguistic symbols and images) embodied in the practices of talking and writing that construct how people make sense of their surroundings through producing, disseminating and consuming these texts.

Language thus becomes central to discursive approaches, irrespective of the nature of texts. Tsoukas (2005) raises the importance of ordinary language by defining a discursive practice as the norm-bound use of a sign system. He notes however that the sign system par excellence in human affairs is language and one looks for patterns in the use of words rather than abstract representations in the mind (as with cognitive approaches – see Section 2.6).

However Hardy, Lawrence and Grant (2005) caution that the discursive approach to organisational phenomena is more than a focus on language and its use in organisations. The approach highlights the ways in which language constructs organisational reality, rather than simply reflecting it.

Discourse analysis emphasises a reality that is being continuously created through language (across texts) embodied in ongoing talk. The study of discourse thus focuses on the ways in which actors draw on, reproduce, and transform those discourses, and, in so doing, produce a social reality consisting of discursively constituted objects and ideas. As cited by Doolin et al. (2013), this aligns with Foucault's (1972, p.49) definition of discourses. Discourses can be understood as bundles of linguistic and material practices that "systematically form the object of which they speak". Discourses "do not identify objects, they constitute them and in the practice of doing so conceal their own invention" (Foucault, 1972, p. 49).

Thus discourses do not refer to just talk-in-interactions at the micro-level. Jian (2011) differentiates between two levels: little'd' discourse and big 'D' Discourse (Alvesson & Karreman, 2000; Jian, Schmisseur, & Fairhurst, 2008). Little'd' discourse refers to talk-in-interaction: everyday conversations taking place in meetings between managers and their subordinates (e.g., the study by Preget (2013) of interactions between DB and DW, two managers working for a major airline).

Big 'D' Discourse, however, refers to systems of thought and fields of knowledge (Foucault, 1972) or what Laclau and Mouffe (1985) called 'an articulated totality' that attempts to fix meaning in a particular domain.

An example of big 'D' Discourse could be the macro-level Discourse on culture change at the organisational level in the Doolin et al. (2013) study of two call centres in CARINCO and how local discourses ('d') relate to macro ('D') discourses. A discursive approach thus brings the advantage of not only understanding the meaning that actors give to matters/issues in conversation but relates these to ongoing, richly contextual macro-level Discourses.

From this brief overview of the discursive turn, it appears that the change domain can gain from adopting a discourse-based approach. Tsoukas (2005) strongly advocates a discursive approach where change is produced through the way people talk, communicate and converse in the context of practical activities. The difference between traditional perspectives and change-through-discourse approach is that change is seen as an evolving achievement, a process of sharing and constructing new meanings and interpretations of organisational activity. Change is constructed and formed in talk and through conversation. Change becomes a process of the spreading, sharing, interpreting, adopting and rejecting of meanings and ideas (Czarniawska & Joerges, 1996).

Aligned with social constructionism (Leeds-Hurwitz, 2009), how actors negotiate meaning presents a new and unique lens through which to understand change better. This deeper understanding can happen through the study of various discursive practices and textual objects. Change happens when one way of talking replaces another way of talking (Anderson, 2005). Unpacking how this happens will most likely provide greater insight into how change is accomplished.

In summary, the discursive approach assumes change happens through talk-in-interactions (or change-through-discourse). The strengths and weaknesses of the approach are assessed in more detail in context of the empirical studies considered in this review.

2.5.2. Strengths and weaknesses of the discursive approach

Nine strengths that contribute to advancing change theory are identified from a review of the selected literature on the change-through-discourse approach. It would appear that the discursive approach offers the following benefits:

- Drills down into in situ conversations. Talk becomes the point of focus and evidence is empirically "strong" (Anderson, 2005; Jian, 2011).
- Role of language is emphasised (Jian, 2011).
- Places meaning centrally on the agenda (Anderson, 2005; Jian, 2011; Tsoukas, 2005).

- Challenges a reconceptualisation of communication (Blaschke, Schoeneborn, & Seidl, 2012; Johansson & Heide, 2008; McClellan, 2011).
- Raises importance of interactions (Ford, 2006; Preget, 2013).
- Increases awareness of skills required during dialogues (Preget, 2013).
- Attends to multiple levels of analysis, thus providing insight into context (Jian, 2011; Nyberg & Mueller, 2009).
- Highlights the role of agency and hegemony (Ford, 2005; 2006; McClellan, 2011).
- Change is seen as socially constructed and ongoing – "becoming" is preferred over "being".

Evidence for these strengths can be gleaned from the empirical studies highlighted below.

Anderson (2005) describes how managers in reviewing routines (such as forecasting) draw on past voices, during conversations, in order to describe what managers usually say and then they create future voices in order to describe how routines may change. The researcher draws on Bakhtin's (1984) concept of "double voice" in order to demonstrate that meaning-making is dialogic – what we say is embedded in history and context. This research demonstrates how talk, the role of language and meaning-making through interaction can be better understood from a discursive approach.

In a similar vein, Ford (2005, 2006) highlights in his study how changing discourses can happen due to interactions and the shaping of meaning over time. In a case of Spartanburg Regional Healthcare System (SRHS), where morale and patient satisfaction was low due to a perceived authoritarian approach by the previous CEO, creating opportunities to talk and engage more shifted the discourse (over a 4 year period) to a shared stakeholder leadership approach (calls for open communication, a more collectively self-reflexive and collaborative process). The case demonstrates that even when a crisis hit years later, the ongoing discourses embedded in principles of shared power led to a co-ordinated effort by team members that successfully addressed the closing down of a rural hospital (that could have been a political quagmire).

Thus in the discursive paradigm, communication is not just a tool (Johansson & Heide, 2008), a means of merely telling or communicating what is to happen by those in charge but becomes a form of translation: translation as engagement, translation as endless transmutations or translation as struggle for meaning (Doolin et al., 2013).

Discursive approaches can thus raise awareness of the benefits of power-sharing and draw out the importance of ongoing meaning-making through interactions and engagements. Ongoing communication and recovering suppressed voices are seen as principles guiding success.

These notions of translation embrace the discourse-based approach of raising importance of talk-in-interaction, joint continuous meaning-making through written and verbal scripts. The discursive perspective "complexifies" traditional relationships between communication and change. Change is a discursive struggle to produce new meanings and ultimately new ongoing realities. In this way, change is transformed from the usual perspective and practice of persuasion into a collaborative practice of conversation aimed at generating new ways to organise (McClellan, 2011).

McClellan (2011) beautifully draws this out in his case study. Conversations are not neutral mechanisms. Even though there are espoused ideals of change at ArtCollege to move to a "greener" more sustainable environment, conversations are stifled by powerful actors with their own agendas. Voices are silenced and opportunities for negotiated meaning and shared ideals are lost.

Linked to successful communication, Ford (2005) raises the importance of the skills needed during discourses (talk-in-interaction). Ford (2005, p. 625) highlights, " here the CEO and VPs' interactive discourse and manifest collaborative skill illustrate a particular discursive context and practice that SRHS eventually evolved into by May 2004". Similarly Preget (2013) also shares the importance of interactional and communicative competencies during discourses of change. She notes that whilst much of the discourse and change literature acknowledges that discourse, and specifically conversation, has the potential to shape the change process, it has not tended to explore the communicative competencies required.

As Grant and Marshak (2011, p. 228) assert, "change agents adopting a more discursive orientation will need to know how to join an existing conversation, shift it in new directions, and monitor and maintain new conversations over time". Preget (2013) maintains that discourse (conversational) analysis has the potential to pinpoint skills required. This is partially demonstrated in her case of two managers dialoguing an issue of late delivery on a project. Preget (2013) posits that these change skills are perhaps required on a daily basis and urgent empirical work is required to unpack these competencies. Such empirical work remains lacking. This provides a useful pointer for ensuing research.

A final example of the strength of the discourse-centred approach lies in discourses viewed from micro and macro-level perspectives. An exemplar of how talk-in-interactions (small 'd') are embedded in larger Discourses is revealed in the research by Jian (2011). In studying the Midwestern Life2, a large US insurance company and an affiliate of a US-based international financial corporation, the researcher demonstrates how a group of managers in reviewing the results of an employee survey make meaning of the suggested changes to human resource policies and employee services. Most employees are not happy with changes to holiday and work schedules, closing of library and fee increase for the corporate fitness centre. These changes result from the company performing poorly and needing to transform its identity from a "family friendly" to "market friendly" identity.

Through talk with the CEO, the employee feedback survey changed from a document with contradictory results to a perceived diagnosis of an organisational psychosis; "counsellors" and "patients" emerged as new identities for middle-managers and dissenting employees, respectively. Overall, the analysis demonstrates how organisational actors struggle to articulate the meaning of the circumstance they are in or confronting, the practices or actions they are to perform and their identities as individuals and as a collective. However, in embedding these struggles in a broader Discourse (e.g., a market orientated Discourse or a Discourse of psychosis) actors may be influenced to shape new beliefs.

On the other hand, Nyberg and Mueller (2009) demonstrate how local discourses may be disconnected from macro-level Discourses. They draw out in their ethnographic study how meaning–making and discontinuous discourses affect culture change in an Australian company CARINCO. Whilst senior managers attempt to create a single culture between two similar call centre environments, managers at the lower levels engaged in local discourses of differentiation. They stymie any chance of homogenisation by providing meaning to routine events, such as award and recognition ceremonies. Usually the two call centres engage in separate awards events. A single awards event was meant to bring teams together, yet the discourse from managers whilst presenting awards strengthened the "specialness" of each environment.

Understanding how meaning is generated within differing levels of discourses becomes a focus for discursive studies, thus drawing insight into how reweaving of actors webs of belief and habits of action are influenced within various contexts.

In summary, a discursive approach brings new insight into how change happens. It embraces the notion that change is ongoing and socially constructed (Chia, 1999; Tsoukas & Chia, 2002). It magnifies *in situ* conversations (thus also drawing on what goes on at the micro-level), makes real-time interactions important for understanding meaning making (Lancione & Clegg, 2013). The usual perspectives on communication are challenged (Blaschke et al., 2012).

Communication is seen as a means to shape and influence meaning by hegemonic actors, rather than just as a means of transfer of information or as an interpretive device (McClellan, 2011, 2014). The discursive approach treats context seriously by attempting to understand how micro-level discourses connect to macro-level Discourses (Jian, 2011).

Although there are numerous strengths to the approach, challenges and opportunities for subsequent research exist. These are explored next. The papers reviewed suggest four gaps for attention in subsequent research to further the discursive approach which could contribute to the advancement of the dual challenge.

Practical insights still missing

The first and most salient matter is that whereas the discursive approach adds rich understanding to how change happens (which has certainly shifted the body of knowledge from traditional rationalist perspectives) the absence of practical advice remains an issue. Practical insights in service of action are still missing (Argyris, 2000). Engaging others, sharing power, paying more attention to talk-in-interaction can be considered high-level advice.

As examples, greater practical expertise on how interactions should be held, how meetings should be facilitated, how conflicting views should be handled, how silenced voices can be redeemed, must be addressed. What is missing is the practical advice of how to think, feel or act (communicate), when tensions and conflict are heightened or when there are strong differences of opinions. This critique has been acknowledged by Johansson and Heide (2008) in their review as well.

Interactional skills required remain underspecified

This leads to and overlaps directly with the second gap. Preget (2013) highlights that the skills required during interactions are fundamental for change. Yet the unpacking of what these skills are, what they entail, remain underspecified.

Doolan et al (2013) argue that:

> Successful change demands that the change agent is skilled in shifting organisational realities, which involves engaging in and steering conversations such that new organisational realities emerge. Not only does successful change require change agents to be willing to encourage and facilitate this translation process, but change also depends upon accommodations and change recipients need to be willing to engage in the change conversations to arrive at a consensus, which may be a significantly different set of meanings from the original change vision. (p. 253).

The limited consideration scholarship so far has given to these interactional skills opens a fruitful area for work which could go a long way in cracking the code. Such research should stretch beyond the broad advice on being good consensus-makers or facilitators. Using laughter as a developed skill or tactic to break down tension could be reviewed as well. Such tactics are tacitly reflected in the data by Jian (2009); McClellan (2011) and Preget (2013).

Increase level of abstraction and theory-building

A third challenge to the discursive approach is to aspire towards greater theoretical explanation. As an example even though frameworks such as that of Jian (2011) are useful in understanding that actors struggle to articulate meaning about the circumstance they are in or confronting, the practices or actions they are to perform and their identities as individuals and as a collective, discursive approaches should more boldly expand or challenge theory if discursive approaches are to propel change theory. Combining the story-telling or narrative approach with the discursive approach may be fruitful.

Strive towards greater meso-level theorising

The fourth reflection is that one possible means of extending the discursive approach and related theory is to adopt a meso-level approach to theorising. Approaches such as those by Jian (2011) and Nyberg and Mueller (2009) could be expanded to build meso-level theories.

Formally defined, meso-level theory and research concerns the simultaneous study of at least two levels of analysis wherein:

- One or more levels concern individual or group behavioural processes or variables,
- One or more levels concern organisational processes or variables, and
- The processes by which the levels of analysis are related are articulated in the form of bridging or linking propositions (House, Rousseau, & Hunt, 1995, p.73).

Meso-level research thus examines the relationships between organisational contexts and behaviour of components (individuals, dyads, group, organisations and groups of organisations) and evaluates how these relationships shape outcomes. In order to develop a meso-level organisational theory, micro-level theories and macro-level theories need to be integrated to articulate how organisational level processes and micro-level processes influence each other (Hunt et al., 2009).Meso-level theorising is thus an ideal mechanism to understand linkages between levels.

Studies such as Nyberg and Mueller (2009) that draw attention to different levels of analysis can benefit from bridging levels with linking propositions. In this way discontinuities (or in other instances isomorphisms - common phenomena across levels of analysis) such as those identified between the organisational level discourses and those at the team level in the case documented by Nyberg and Mueller (2009) can be linked by propositions, providing "richer theorising".

A meso-level understanding of change would thus mean a sufficiently fine-grained understanding showing how change was actually accomplished (or not) on the ground, how conversations and texts influenced shifts in beliefs and how these shifts influence macro-level outcomes (Tsoukas & Chia, 2002).

Conduct more "in- flight" real-time studies

The final gap is that although real-time *in situ* conversations must be applauded within the approach for revealing what actors say in flight many of the empirical studies reflect only tiny incisions in the overall processes of organising (Weick, 1995) and becoming (Tsoukas & Chia, 2002). As examples, Anderson's (2005) study only captures a few episodes of engagement, and the same applies to Jian (2011) and Preget (2013). In fairness, the researchers may have accumulated much more data but selectively focused on specific incidents. However, greater focus on real-time data over the long term may reveal broader patterns and processes of change. The challenge is most likely a practical one of access and that of required extended time in the field (Babbie & Mouton, 2003).

Werkman (2010) supports more real-time longitudinal studies. He argues that while we claim to acknowledge change as continuous, we study it as episodic. The mismatch between such an episodic orientation and the ongoing interactions in which change is actually being created may very well be the reason why problems like resistance to change occur.

As Tsoukas and Chia (2002) guide:

> Unless we have an image of change as an ongoing process, a stream of interactions, and a flow of situated initiatives, as opposed to a set of episodic events, it will be difficult to overcome the implementation problems of change programs reported in the literature. (p. 569)

2.5.3. Conclusion of the discursive approach

The discursive turn shifts attention to the actual talk, communication and texts involved in interactions. Discourse analysis offers a credible approach for tackling the micro-level detail (furthering insight into the conversations that make change happen). Unlike the majority of cases reviewed in the storytelling approach, the discursive turn deals effectively with real-time *in situ* conversations. All these findings are important as the discursive turn lays the theoretical scaffolding challenging traditional notions of change.

As examples meaning-making and change is seen as happening through talk-in-interaction and communication is not merely one directional (as in traditional approaches) but can even be conceptualised as hegemony. Although these theoretical pegs create many positive aspects to the discursive turn, like storytelling, practical insights are missing. Whereas interactional skills are seen as important, the explicit identification of these skills remains underspecified. This is important to start making in-roads towards cracking the code of change.

2.6.   Theme 3: Cognitive approaches

The third theme identified is that of change occurring through shifts-in-schemata. This approach takes a distinctly cognitive turn to change. Whereas storytelling emphasises the stories actors tell and sell; and discourses cover ground on meaning-making and influence through talk, the cognitive approach shifts attention towards actor's schemata (mental models), their processing and interpretation of change-related information, and resultant responses.

First, the main concepts from this perspective are reviewed: for example, what is meant by mental models (schemata) is analysed. Second, the importance of mental models to the change domain is appraised. Third, the strengths and weaknesses from this approach are evaluated.

2.6.1. Mental models and their use

Generally speaking, a mental model or schema is an abstract representation in the mind of an individual of an external situation or a system (Forrester, 1961, 1992). Individuals develop mental models that guide their understanding of the surroundings and how they react to them (Johnson-Laird, 2001,2004).

More specifically Doyle and Ford (1998, 1999) with input from Lane (1999) define a mental model as ''a relatively enduring and accessible, but limited, internal conceptual representation of an external system (historical, existing, or projected) whose structure is analogous to the perceived structure of that system". They attempt this definition in order to reconcile various schema attributes that present conflicting views in the literature (e.g., are mental models stable or fleeting; accessible or outside of conscious awareness; are they composed of picture like images, declarative knowledge, concepts or intuitive theories?). They achieve a generally accepted definition of mental models, especially for research conducted in the system dynamics domain (Kim, 2009; Schaffernicht & Groesser, 2011; Groesser & Schaffernicht, 2012).

Kuhn and Corman (2003) extend the understanding by presenting a schema as a knowledge structure, mental template, or logic of action (Bacharach, Bamberger, & Sonenstuhl, 1996) that has been formed by experience in a given information environment; it is imposed on a context to construct and interpret its form and meaning. In similar vein, the causal connections among constructs is highlighted by Bingham and Kahl (2013) who define schemata as knowledge structures that contain categories of information and relationships among them. They argue further that with the accumulation of experience and understanding, a given schema will become more stable because the categories and relationships comprising schemata become harder to change. This strengthens support for the contention that routines strengthen schemata (Feldman, 2000).

Awareness though of the subjective and socially constructed nature of mental models is probed by Kuhn and Corman (2003) who reflect that schemata are formed through interaction with other actors and with macro discourses. Knowledge structures are shaped by social intercourse, are inherently communicative and are stored and reflected linguistically. Verbalising thoughts reveals glimpses of mental models; the beliefs, values, and assumptions that actors personally hold and that underlie reasons for doing things in the way people do (Maani & Cavana, 2007; Guiette & Vandenbempt, 2013).

Whereas Doyle and Ford (1999) draw attention to mental models being an abstract map of an external system Kuhn and Corman (2003) and Bingham and Kahl (2013) stress that such schemata are shaped by social engagement and experience in a specific environment (possibly deepened through routines (Feldman, 2000)) and this structure assists with interpretation and meaning. Although mental models (schemata) are individual, shared mental models may develop over time as organisational members share experiences (Pillai & Williams, 2004). In support of a group level construct, Kim (2009) reviewed mental models at the team level more thoroughly and distinguished various team level concepts of mental models dependent on the level of analysis and location of the processor. This achieves a deeper understanding of various constructs used (such as organisational memory, etc.).

2.6.2. Importance of mental models to change domain

Scholars such as Kuhn and Corman (2003) and Balogun and Johnson (2005) have assembled robust evidence that mental models are important because they can provide insight into the interpretations and meanings provided by actors. They have potential to reveal underlying assumptions, beliefs and justifications. They also have the potential to reveal the thinking behind storytelling, selected discourses and ultimately choices and decisions by actors. Schemata allocate attention, facilitate encoding and retrieval from memory and thereby help to produce information and interpret experience that is put to use in making decisions (Kuhn & Corman, 2003).

Mental models are therefore also crucial in reasoning processes. Johnson-Laird (1999, 2001, 2004) confirms through examples that mental models are used in inductive and deductive reasoning. In situations of high uncertainty and ambiguity (equivocality), mental models are important in the sensemaking process (Nielson & Abildgaard, 2013).

An example of a situation with high levels of equivocality is described by Weick et al. (2005). They describe a nurse who is nursing a baby with complications of the patent ductus (a condition where the ductus arteriosus, a blood vessel that allows blood to bypass the baby's lungs before birth, fails to close after birth and if doesn't close the baby is at risk of heart and lung failure). In a step by step analysis of what happened, Weick and colleagues describe more closely how sensemaking occurs (e.g., through noticing, bracketing, labelling, communicating). What is important is their highlighting of the role of mental models in the process.

In their words (Weick et al., 2005):

> The nurse's noticing and bracketing is guided by mental models she has acquired during her work, training, and life experience. Those mental models may help her recognize and guide a response to an open ductus condition or sickness more generally. Such mental models might be primed by the patient's condition or a priori permit her to notice and make sense of those conditions. Some combination of mental models and salient cues calls her attention to this particular baby between the hours of 9 to 11 with respect to a bounded set of symptoms. (p. 411)

Mental models aid in sensemaking processes and help with abductive inferences (the nurse iteratively observed incoming data and referred to her knowledge structures of the condition) in order to reason out that there was a potentially serious problem.

In summary, mental models have good utility in explaining why actors interpret, make meaning of phenomena, take decisions and act in particular ways (Bartunek, Rousseau, Rudolph, & DePalma, 2006). Although the cognitive turn to understanding change and related processes (e.g., sensemaking) is not favoured by some scholars, for example Tsoukas (2005) and Maitlis and Christianson (2014), both of whom prefer a discursive approach, other scholars more recently do favour the cognitive approach. Van de Ven and Sun (2011) draw out the importance of mental models adjusting, amending, changing, to match the dynamic nature of change whilst Guiette and Vandenbempt (2013) drive the point on the strength of focusing on cognitive processes.

They strongly argue that the embeddedness of strategic change in complex organisational systems, the multiplicity of changes unfolding in organisations, the different conceptual perspectives used to interpret change and the different interpretations of change agents and recipients, all contribute to the relevance of focusing on cognitive processes to inform research on strategic change. It is in this context that cognition proves to be particularly relevant in understanding and explaining how organisational teams perform complex tasks under changing conditions.

The strengths and challenges related to this theme are analysed next.

2.6.3. Strengths and weaknesses of the cognitive approach

From the review of the selected literature, three main strengths of the approach are identified for analysis below.

Schemata provide an appropriate unit of observation to understand actors meaning construction

Kuhn and Corman (2003) and Balogun and Johnson (2005) contend in their respective studies that the schema function well as a unit of observation that is sensitive to idiosyncratic meaning construction and in understanding the dynamics of knowledge structures and sensemaking over time. From their respective research, three reasons highlight the strength of a cognitive approach with schema as the unit of observation.

- First, their studies show how the change schemata allow investigations of organisational cognition to move beyond conceptual and anecdotal work, providing empirical studies of knowledge structure dynamics in organisations examined in real-time (work that is rare).

- Second, both studies involve change that is planned but provide evidence of change as an ongoing improvisation (Orlikowski, 1996; Tsoukas & Chia, 2002). These are important observations as change is usually pitted as either planned or emergent. Here, by studying schemata longitudinally and within context, the studies show how schemata (old and developing) emerge and are influenced by social interaction (both formal and informal) over time. Both intended and unintended consequences present themselves as a result.

- Lastly, by focusing-in on schemata, and by using an elegant centering resonance analysis to develop an understanding of changing schemata over time, Kuhn and Corman (2003) demonstrate that planned change can lead to both heterogeneous and homogenous schemata. This is important as it is in contrast to existing work on planned change that assumes homogeneity of schemata as a result of managerial edict.

In sum, mental models matter as they provide deeper insight into change processes.

Attention is given to change specific schema

Rather than focusing on schemata more generally, change-through-schema-alteration draws specific attention to change schemata. Lau and Woodman (1995, p.538) represent a change schema as "the knowledge structures of change attributes and relationships among different change events".

Their change schema has five dimensions: *impact of the change on current practice*, *intensity and significance of the change process*, *the change's meaning*, *its salience*, and *personal control over the change*. Therefore, because change events are usually related to routine organisational activity, members connect the change initiative with their regular work. In other words, the change schema indexes not only conceptions of the change, but also the activity affected by it.

From the above, understanding change schemata is important as they provide insight into actors thinking specifically about aspects of change. In adopting Lau and Woodman's (1995) perspective, Kuhn and Corman (2003) summarise that a change schema is therefore an individual's knowledge about, interpretation of and framing device for a particular change. It can be conceived as a set of networked concepts in an actor's mind, made manifest in talk. The authors thus highlight that aside from change schemata being knowledge structures about change, they become evident through conversations.

In contrast to Lau and Woodman (1995) and Kuhn and Corman (2003), Armenakis and Harris (2002) introduce the notion of change beliefs or sentiments. They posit that there are five change beliefs or sentiments that are important to address if a positive change outcome is desired. These change sentiments are:

- *Discrepancy* - the belief that a gap exists between the status quo and a desired state – that change is required;

- *Appropriateness* - the belief that the approach adopted to address the gap/need is the right one and/or the belief that the solution/s are appropriate;

- *Efficacy* - the belief and confidence in one's personal and organisational abilities to successfully implement the change;

- *Principal support* - the belief that change leaders, organisational leaders, one's immediate manager and one's respected peers demonstrate that they support the organisational change and are motivated to see it through and lastly;

- *Valence* - refers to the perceived personal benefit (or personal loss) one may reasonably expect as a result of an organisational change).

Whereas debating the conceptual differences and comparability between schemata (knowledge or interpretive structures/schemes), beliefs and sentiments is beyond the scope of this review, it is notable that there is overlap between the conceptions. More generally, they all refer to an individual's assessment and interpretation of change. They attempt to help make sense of what the impact of the change could be, especially from the individual actor's perspective. Although the Lau and Woodman (1995) dimensions appear to suggest a more rational, accepting assessment (for e.g., impact on current practice (routines)), the Armenakis and Harris (2002) perspective appears to be a more critical and questioning one (e.g., belief related to discrepancy (is there a problem?) or appropriateness (is the approach appropriate?)).

This perspective is preferred as from the many cases reviewed a critical rather than passive approach from actors is evidenced. Further the Armenakis and Harris (2002) perspective introduces the notion of sentiment which suggests more than just cognition but also introduces emotion. A thorough search in the Annual Review of Psychology over a 10-year period from 2004 to 2014 revealed that the term "sentiment" is not well defined in the psychological literature.

Some clarity is provided by Kim and Hovy (2004). They describe an opinion as a quadruple [Holder, Claim, Topic, and Sentiment] in which the Holder believes a Claim about the Topic and in many cases associates a Sentiment that is an emotive evaluation with the belief. Sentiments always involve the Holder's emotions or desires, which may be present explicitly or only implicitly. Sentiments are the affective parts of opinions; emotional dispositions about an object (Topic).

In summary, the second strength of introducing a cognitive approach to understanding change, introduces the more specific concept of a change schema. This brings the benefit of deepening understanding of how actors think and feel about change through better understanding of for example change sentiment. Armenakis, Harris, Cole, Fillmer and Self (2007) and Armenakis and Harris (2009) argue that if an advanced understanding of change is to be developed, then future research must develop a deeper understanding of how these change beliefs/sentiments influence the change process and if there is a preferential order or priority in which these are addressed. In contrast Gondo, Patterson and Palacios (2013) challenge that the development of positive beliefs may not result in changes to practices. They posit that developing *mindfulness* is crucial for actions to materialise. There is therefore support that future research should pay attention to cognitive aspects such as change schemata, change beliefs/sentiments and mindfulness.

Focus on schema-change raises awareness of learning theories (such as double loop learning)

The cognitive turn draws attention to learning theories. Two recent papers selected in the literature review draw on the importance of unlearning old mental models and replacing them with new ones. Nielsen and Abildgaard (2013) include actor's mental models as a key component in their change evaluation framework supporting that change happens if mental models are amended. Gondo et al. (2013) similarly stress that for change to occur shifting mental models requires mindfulness ("being attentive to and aware of what is taking place in the present" (Brown & Ryan, 2003, p. 822). This is supported by previous research and draws on theories of learning (Smith, 2001, 2013).

Gondo et al. (2013) argue that although change recipients may positively support particular change beliefs (e.g., discrepancy, appropriateness etc.) deeply held assumptions through largely unconscious interpretive schemes (mental models) may hold them back from following through on actions. Although their argument is conceptual and empirical evidence is not provided in their paper, the point that actors may be unaware of mental models has been frequently raised. For example Senge (1990, p.9) claims that "very often, we are not consciously aware of our mental models, or the effects that they have on our behaviour".

Argyris (2004) similarly posits that people are blind to their incompetencies, and are unaware that they are blind. This pattern is so common that Argyris (1993) and Argyris & Schön, (1996) call it a generic "anti-learning" pattern. One way of making sense of this disconnect between people's actions and the theory they espouse is to say that there is a split between theory and action.

Argyris and Schön (1974) suggest that two theories of action are involved: ***espoused theories*** and ***theories-in-use***. The distinction between the two contrasting theories of action is between those theories that are implicit in what practitioners and managers actually do (theories in use) and those which they call on to claim (say) what they will do (espoused theories), that is, what they would like others to think they will do.

> When someone is asked how he would behave under certain circumstances, the answer he usually gives is his espoused theory of action for that situation. This is the theory of action to which he gives allegiance, and which, upon request, he communicates to others. However, the theory that actually governs his actions is this theory-in-use. (p. 6-7)

Although it is beyond the scope of this review to explain why actors are unaware of this gap between theories of action, more recently, Becker, Cropanzano, & Sanfey (2011, p.942) provide the following insight:

> Implicit and explicit attitudes are fundamentally different in terms of when and how they are produced in the brain. Implicit attitudes arise first, are affectively loaded, and remain largely outside of consciousness…because they arise first; they can short-circuit other beneficial non-conscious and conscious processing. (p. 942)

Thus in the context of change, mental models can persist in organisations long after the structures and systems they initially supported are explicitly discredited because, once developed, these deeply rooted implicitly held understandings are relatively self-activating and reside in routines (Gondo et al., 2013). They may explain the gap and the behaviours of actors through change processes (Nielsen & Abildgaard, 2013).

However, although deeply held assumptions tend to persist as seen in cases (for e.g., such as police officers not wanting to change routines (Werkman, 2010) or that of dominant stories creating inertia in the case of Scandinavian company needed to adjust practices), there are suggestions that mental models can change, given the right conditions and mechanisms.

Gondo et al. (2013) suggest that through dialectical processes (Bartunek, 1984; Balogun & Johnson, 2004) in which individual change recipients uncover routine behaviours that are no longer appropriate and then engage in fine-tuning activities such as trial-and-error learning (Rerup & Feldman, 2011), negotiation (Barley & Tolbert, 1997) and sensemaking (Balogun & Johnson, 2004; Balogun & Johnson, 2005) alterations to schemata and routines can occur.

The authors suggest that recognition of the need to engage in these fine-tuning activities is however predicated on change recipients having a heightened attentiveness and awareness of what is taking place in a given situation as it unfolds (Jordan, Messner, & Becker, 2009). This heightened awareness, especially if it permits challenging underlying assumptions points to the difference between single loop and double loop learning, as posited by Argyris and Schön (1974, 1978, 1996).

Importance of single and double loop learning

To better understand and appreciate single and double loop learning, Argyris and Schön (1974) first develop a model of the processes involved in theories-in-use (the theory that governs actions). Three variables develop the model namely:

- *Governing values -* those dimensions that people are trying to keep within acceptable limits (e.g., achieving the purpose as actors defines it);

- *Action strategies* -the moves and plans used by people to keep their governing values within the acceptable range (e.g., control environment and task unilaterally operationalised as possibly through treating ones' own views as obviously correct) and;

- ***Consequences*** - what happens as a result of action (e.g., reduced production of valid information).

Where the consequences of the strategy used are what the person wanted, then the theory-in-use is confirmed. This is because there is a match between intention and outcome. There may however be a mismatch between intention and outcome (i.e., an error may occur). In other words, there may be unintended consequences, which may also work against the person's governing values. Argyris and Schön (1974) suggest two responses to this mismatch, and these can be seen in the notion of ***single*** and ***double-loop learning*** (Smith, 2013). The above theory-in-use clarifies the conditions under which single and double loop learning can occur. The condition is a mismatch between intention and outcomes.

According to Argyris and Schön (1974) when the mismatch occurs and there is an opportunity for learning, most people will select revised strategies and actions aligned with governing values. This approach is referred to as single loop learning. In contrast, challenging the underlying ***governing values*** represents double loop learning, as it would lead to new strategies and consequences.

Argyris and Schön (1974) continue building on their organisation learning theory. They set up two models that describe features of theories-in-use that either inhibit or enhance double-loop learning. Argyris (1985) has claimed that just about all the participants in his studies operated from theories-in-use or values consistent with Model I. Model II behaviours are rare but usually espoused by actors.

Model I and Model II

The primary features of Model I and Model II are highlighted in the Table 2.5 below, assimilated by Smith (2013).

Table 2.5.   *Comparison of Model I and Model II*

Model I	Model II
The governing Values of Model I are: • Achieve the purpose as the actor defines it • Win, do not lose • Suppress negative feelings • Emphasize rationality	*The governing values of Model II include:* • Valid information • Free and informed choice • Internal commitment
Primary Strategies are: • Control environment and task unilaterally • Protect self and others unilaterally *Usually operationalized by*: • Unillustrated attributions and evaluations e.g., "You seem unmotivated" • Advocating courses of action which discourage inquiry e.g.. "Let's not talk about the past, that's over." • Treating ones' own views as obviously correct • Making covert attributions and evaluations • Face-saving moves such as leaving potentially embarrassing facts unstated	*Primary Strategies include:* • Sharing control • Participation in design and implementation of action *Operationalized by:* • Attribution and evaluation illustrated with relatively directly observable data • Surfacing conflicting view • Encouraging public testing of evaluations
Consequences include: • Defensive relationships • Low freedom of choice • Reduced production of valid information • Little public testing of ideas	*Consequences should include:* • Minimally defensive relationships • High freedom of choice • Increased likelihood of double-loop learning

Note. Adapted from *Argyris, Putnam & McLain Smith (1985, p. 89) and Anderson (1997)*

Significance of learning theories to change

Three strengths highlight the power of a cognitive approach that focuses on schema-change. First, the importance of the elegant theorising by Argyris and Schön (1974, 1978, 1996) to the change domain is that if there is acceptance that change involves the continuous reweaving of actors beliefs and habits of action (Tsoukas & Chia, 2002), then Argyris and Schön's (1974) learning theory suggest that to enable the reweaving of beliefs, the process starts with challenging underlying governing values in order to see changes to actors' habits of actions.

Reweaving of beliefs can be expressed as altering of schemata, and the theory suggests that for this to happen features of Model II must be encouraged. Second, unlike the storytelling and discursive approaches, Argyris and Schön's (1974) learning theory advances a theory in service of action (Argyris, 2000). There is a practical set of thinking strategies and behaviours suggested that promote schema-change and learning. For example if Model II behaviours are exhibited (e.g., surfacing the conflicting view or encouraging public testing of evaluations) different set of outcomes may be achieved. As noted, actionable theories start making in-roads towards cracking the code of change.

Third, cognitive based learning theories such as Argyris and Schön (1974) draw attention to conditions under which schema-change can occur. For example, when there are theories-in-use which result in mismatches between intended strategies and outcomes, learning opportunities arise. Promoting double loop learning in these circumstances may prove valuable. The assumption is that to encourage/promote such learning, there are specific skills that may be required (e.g., to surface and challenge deeply held governing values).

As supported by Edmondson and Moingeon (1999, p.162) "employing Model II in difficult interpersonal interactions requires profound attentiveness and skill for human beings socialized in a Model I world". Although a rich set of concepts and frameworks exists (such as double loop learning, Model I and II, governing variables, behaviour, defensive routines etc.), not much application finds its way into the empirical change work. This opens a fruitful area for subsequent research.

In summary, shifting change-schemata draws attention to learning theories. The assumption of this review is that such learning theories that surface, for example, unawareness of mental models and resultant behaviours could add depth to the deeper theoretical understanding required of how change happens. This limited attention by scholarship provides a rich research opportunity.

Although two major strengths to the cognitive turn are identified, three main weaknesses are analysed below.

Significant shortage of empirical studies

From the papers reviewed, scholars over the last decade have highlighted the benefit of a cognitive approach to understanding change. Argyris (1991, 2004) continued to argue (over three decades) that real change only happens when individuals change their theories-in-use. In line with this, Taris and Kompier (2003) argue that by studying changes in individual participants' mental models, the understanding of why changes in behaviour occur may be advanced. Likewise Kavanagh and Ashkanasy (2006) observe that change failure rates are cited to be very high and suggest that the lack of advancing change theory could be attributed to the continued underestimating and ignoring of the cognitive-affective aspects related to change.

More recently Nielsen and Abildgaard (2013) uphold the argument that mental models determine how participants react to intervention and its related activities. Mental models may explain the behaviour of key stakeholders throughout the intervention project.

Guiette and Vandenbempt (2013) demonstrate empirically the benefit of better understanding mental models (and group level cognition) highlighting that better process knowledge of change requires understanding of factors at play during the process of cognitive re-orientation which represents the backbone of strategic change (Gioia & Chittipeddi, 1991).

Despite emphasis on cognition and the suggested benefit that may accrue, very few papers reviewed reflect a cognitive approach to understanding change. This may be as a result of scholars such as Tsoukas (2005) and more recently Maitlis and Christianson (2014) suggesting that a discursive approach holds greater benefit than the behaviourist or cognitive approaches. Having reviewed the selected papers on stories, narratives and discourses, it is suggested here that these approaches may not be mutually exclusive. Combining the approaches, understanding the discourses at play and coupling these with social cognitive theory may enhance understanding of change. Two good examples following this approach are Brown and Humphreys (2003) and Brown et al. (2008) that analyse the provision of stories by actors from a cognitive or psychological perspective.

An important limitation from the perspective of this review is that not enough empirical research appears to have been done on change through schema-alteration (cognitive re-orientation).

Abstractness and related difficulty of "observing" mental models

The second limitation of this approach could be related to why there are fewer empirical studies as compared to other approaches (e.g., storytelling). Kuhn and Corman (2003) raise the practical difficulties of scholars working in this domain. In conceiving change schemata as a set of networked concepts in an actor's mind, manifest in talk, they note that one problem confronting researchers who attempt to capture the connections in schemata is to locate a method for understanding the knowledge manifest in discourse. Such a method must address (a) the proper units of observation, or how to find the knowledge expressed in one's discourse and (b) the relative importance of units of data within different structural configurations in discourse. The authors advance techniques that align with this need, such as centering resonance analysis.

On the other hand Tsoukas (2009) and Bingham and Kahl (2013) take written discourse to represent cognitive schemata. They adopt Carley's (1993, 1997) cognitive mapping approach to measure cognitive schemata. Cognitive mapping is a form of content analysis that involves processing sentences in a text to isolate categories and their relational structure.

A final example is that of Guiette and Vandenbempt (2013) who recognise that although existing mental model mapping techniques have proved useful (Fiol & Huff, 1992; Huff, 1990) they deliberately adopt a sensemaking perspective in order to generate a deeper process understanding of team mental model dynamics to focus in on recipients interpreted meanings. From the few and recent examples above, it can be seen that although mental models may be an abstract concept, through either written text or the words and interpreted meanings of participants, research on mental models can be advanced.

Lack of utilisation of other social cognitive theories (such as cognitive dissonance theory)
From the selection of literature reviewed, many of the articles highlight conditions, attitudes or behaviours such as heightened conflict, tension, perceived resistance to change, badmouthing and reducing the importance of the suggested change.

For example, in the articles of Ford (2006) and Näslund and Pemer (2012), after reaching high levels of mistrust and heightened conflict, the respective CEOs were asked to leave. Similarly in their respective articles Werkman (2010) and Dawson and McLean (2013) highlight that actors were deeply frustrated (i.e., there were prevalent conditions of heightened conflict) and there was anger targeted at those introducing new ways of doing things. The policemen refused to adopt a new way of addressing emergency responses in Werksman's (2010) case and the miners clearly saw management as "incompetent fools" introducing new management techniques in the Dawson and McLean (2013) case. The behaviour of discrediting and rejecting actors was also raised in cases such as that by Beech and Johnson (2005) and Guiette and Vandenbempt (2013). All of these examples though do not draw on these behaviours to enrich change theory. They are treated merely as part of the story rather than as crucial phenomena to enhance understanding of how change happens.

Further, there are many cases that serve as exemplars showing that change disrupts regular routines and practices (Feldman, 2004; Guiette & Vandenbempt, 2013) and challenges actors in the process to think and act in new ways (McClellan, 2011). This creates conditions of competing cognitions and challenges existing mental models (Kuhn & Corman, 2003). Social cognitive theory can provide rich explanations for these phenomena, yet, as noted by Bouckenooghe (2010) and Houchin and MacLean (2005) few studies utilise such theory. Two exceptions noted previously are Brown and Humphreys (2003) and Brown et al. (2008). This underutilisation is surprising as it is continuously highlighted in the change literature. In case after case circumstances of growing discomfort by actors and stories of silenced voices and forced/induced compliance are highlighted.

For example Jansson (2013) points out that some people remain silent out of fear of negative personal or professional consequences. Kish-Gephart, Detert, Trevino and Edmondson (2009) state that employees, in avoiding the unpleasant characteristics of fear may develop fear-based silence behavior. Surprisingly, there seems a limited adoption of cognitive dissonance theory, which may have high predictive power for such behaviours (Kenworthy, Miller, Collins, Read, & Earleywine, 2011). In light of the foregoing, it is suggested here that change theory could benefit from utilisation of social cognitive theories, such as cognitive dissonance theory or attribution theory (Hodgkinson & Healy, 2008). The current state of underutilisation presents an interesting opportunity for research in the change domain (Jaros, 2010). This observation has also been supported in a review by Telci, Maden and Kantur (2011) who prompt that management studies including change can benefit specifically from the adoption of cognitive dissonance theory in change research.

Next, the predictive power of cognitive dissonance theory is appraised.

The predictive power of cognitive dissonance theory

More than 50 years after Festinger (1957) first published his theory of cognitive dissonance, which has been repeatedly challenged, amended and revisited in the interim, the theory still holds high explanatory power for behaviour. Kenworthy et al. (2011, p.99) support this by highlighting that it is the ability to explain the "dynamic between our beliefs and our actions, and how we strive for consistency between our internal and our external lives" that makes the theory powerful. The theory of cognitive dissonance as first posited by Festinger (1957) provided a different theory for attitude change as compared to the then dominant learning and information assimilation theories. As demonstrated in the experiments by Festinger and Carlsmith (1959), the theory demonstrated that attitude change could be predicted by shifts to attitudes as a result of internalising (rationalising) conflicting cognitions. This was a more powerful predictor of attitude change, as compared to when there is an external reward under conditions of induced/forced compliance.

Festinger (1957) suggested that cognitive dissonance describes a psychological state in which an individual's cognitions—beliefs, opinions and attitudes are at odds with some other cognitions. The theory focuses on inconsistencies between cognitions and proposes that two cognitions, relevant to one another, will either be consonant or dissonant. They are consonant if one of the cognitions follows from the other. They are dissonant if one of the cognitions psychologically implies a contradiction of the other. The importance of the theory lies in the observation of behaviour of those actors experiencing dissonance.

Festinger (1957) posited that in the presence of dissonance, actors will be driven/motivated to reduce dissonance, as they cannot stay in this state (i.e., actors seek for consistency between cognitions). Actors take actions to reduce dissonance. Only under certain conditions (e.g., forced compliance where reward or punishment is high) do actors "stomach" dissonance.

Festinger (1957) further posited that dissonance reduction can happen in one of three ways (remove dissonant cognitions, add new consonant cognitions (endorsement of the counter-attitudinal behaviour), or reduce the importance of dissonant cognitions (e.g., trivialising or denying cognitions)). Alternatively, dissonance may be reduced by seeking social support for one's counter-attitudinal behaviour, thereby increasing consonant cognitions. By stipulating these actions, Festinger (1957) achieved an elegant explanation of why actors behave in particular ways under specified conditions. However, the theory was challenged from various perspectives.

Competing theories

Cognitive dissonance theory has been challenged continuously over decades. Understanding for example the antecedents, mediator or moderator variables, the conditions that stimulate dissonance, the nature of dissonance construct itself (for e.g., is it purely cognitive or does it have affective and physiological properties as described by Festinger's notion of discomfort) has stirred heated arguments amongst dissonance theorists (Harmon-Jones & Mills, 1999).

Kenworthy et al. (2011) recently noted these ongoing debates but acknowledged the importance of the initial theory:

> The dissonance literature is often contentious and documents disputes regarding the theoretical origin of dissonance arousal. Each revision or new model of the theory has generated research and further controversy. In the bigger picture, however, the research generated by Festinger's initial formulation represents a key piece of social psychology's endeavour to understand the nature of human cognition and motivation. (p. 38)

Some notable challenges to the theory include Aronson's (1968) contention that dissonance is the result of the conflict between people's self-concept and their actions, that is, dissonance is created if they act in a way that contradicts with how they perceive themselves. Rather than just competing cognitions, Aronson (1968) specifically explains dissonance through the self-concept paradigm.

Another alternative is the "impression-management theory" offered by Tedeschi, Schlenker and Bonoma (1971) which states that people change their attitudes because they want to manage how others view them. Thus unlike Aronson (1968) the focus shifts from an internal introspection to concern about how one is viewed by others. Specifically, this theory holds the view that people try to create positive impressions on others or at least avoid a negative impression by developing attitudes that are consistent with their behaviour. Another alternative theory is Bem's (1972) "self-perception theory". This theory states that people observe their actions as if they were outsiders and infer their underlying attitude from the analysis of their behaviour and the circumstances surrounding the behaviour.

Cooper and Fazio (1984) on the other hand argued in support of "the new look" paradigm - that dissonance is not related to inconsistency between cognitions but is a result of a consequence that is unwanted. People feel responsible when they act in a way that results in an adverse consequence and dissonance is created as a result. Steele (1988) came up with yet another explanation and claimed dissonance to be a result of behaving in a manner that goes against one's sense of moral integrity. According to this revision, known as the "self-affirmation theory", dissonance is not created by cognitive inconsistency, self-inconsistency, or feeling responsible for unwanted consequences, it is as a result of the discrepancy between one's action(s) and moral judgment.

The differences in theoretical perspectives have to do with what causes dissonance rather than whether that dissonance occurs and motivates action to reduce dissonance effects. More recently Kenworthy et al. (2011) conducted a transparadigm meta-analysis to identify mediators, moderators and consequences of dissonance.

They attempt to test the conceptualisation of the dissonance construct from the various theoretical perspectives above (e.g., Festinger's psychological discomfort theory, Aronson's (1968) self-conception theory and Cooper and Fazio's (1984) consequence theory). Using structural equation analyses, performed within and across five research paradigms (induced compliance, insufficient justification, disconfirmed expectancies, selective exposure, and free choice) corresponding to major versions of cognitive dissonance theory, the researchers tested alternative theoretically derived models.

The results did not support Festinger's notion that discomfort mediates dissonance effects. Rather, consistent with the conceptualisation of guilt as the drive component of dissonance theory, guilt strongly predicted dissonance effect sizes, irrespective of which model was tested. Their findings have important implications for dissonance theory. One such implication is best highlighted in the researchers' words:

> …dissonance can be seen as a motivational state that is most strongly induced when the cognitions involve a discrepancy between present behaviour and standards for behaviour—the formula for guilt—as suggested not only by several dissonance researchers (e.g., Aronson, 1992; Steele, 1988) but also by proponents of Objective Self-Awareness theory (e.g., Wicklund & Duval, 1972). This finding does not contradict Festinger's (1957) model, but points to the role of the self and one's standards as key determinants of the importance of cognitions. In other words, Festinger's original thinking posited importance of cognitions as primary determinants of dissonance (see also Mills, 1999), and the current findings suggest that cognitions become more important to the degree that they are concerned with moral values and standards for behaviour. (p. 51)

In summary it is beyond the scope or interest of this review to reconcile the nomological network issues, discriminant or convergent validity issues related to dissonance as a construct. What is important is recognising the consensus that under specific conditions (e.g., forced compliance or selective exposure) actors experience dissonance. The motive and drive for why this happens can be explained through various dissonance theories but what remains central is that the dissonance reducing behaviours are not argued by theorists and are predictable. These behaviours have been observed in the cases reviewed (e.g., badmouthing) and it is argued here that dissonance theory can play a strong role in furthering change theory.

2.6.4. Conclusion to the cognitive approach

The cognitive turn highlights the theoretical opportunities that exist in extending change theory. The cognitive turn draws attention to shifts in beliefs through changing schemata. Due to the significant shortage of empirical research, rich research opportunity exists to draw on learning theories such as double loop learning and dissonance theory in order to advance change theory and progress the dual challenge: The potential for making in-roads to cracking the code and developing a theory in service of action is high if these theories are utilised.

2.7. Theme 4: Sensemaking and sensegiving

The fourth perspective is that change occurs through processes of sensemaking and sensegiving. This section begins by elucidating the key concepts employed by this approach. It then analyses the strengths and weaknesses of the perspective, concluding with the challenges and opportunities faced by researchers wishing to employ it.

2.7.1. Defining sensemaking - autonomous or socially constructed?

Tsoukas and Chia (2002) underline the centrality of reweaving actors' webs of belief and habits of action to organisational change. Weick et al. (2005) posit that this happens through sensemaking and sensegiving processes. From this perspective, understanding the micro-level (individual and group) processes of change demands a deeper understanding of these processes.

Sensemaking has been defined in numerous ways, but the primary debate is whether sensemaking occurs *within* or *between* individuals. Maitlis and Christianson in their 2014 study analysed 15 differently phrased definitions. The major differences between these definitions and their associated variety of meanings lay in their underlying ontological assumptions.

Studies such as those of Kuhn and Corman (2003) and Bingham and Kahl (2013) frame sensemaking as a cognitive process, involving aspects such as bracketing, labelling, comprehending, understanding, explaining, attributing, and inferring (Starbuck & Milliken, 1988; Weick et al., 2005) which influence mental models (schemata).

Maitlis and Christianson (2014) surface the cognitive emphasis in Starbuck and Milliken's (1988) definition:

> Sensemaking has many distinct aspects—comprehending, understanding, explaining, attributing, extrapolating, and predicting, at least. For example, understanding seems to precede explaining; predicting may occur without either understanding or explaining; attributing is a form of explanation that assigns causes.[…] What is common to these processes is that they involve placing stimuli into frameworks (or schemata) that make sense of the stimuli. (p. 51)

This definition aligns at the theoretical level with Hill and Levenhagen's (1995, p. 1057) description of practitioner behaviour: "to cope with these uncertainties, the entrepreneur must develop a 'vision' or mental model of how the environment works (sensemaking) and then be able to communicate to others and gain their support (sensegiving)".

In contrast to this cognitive emphasis, other definitions position sensemaking as a distinctly social process occurring between people as meaning is negotiated, contested, and mutually co-constructed (Maitlis & Christianson, 2014). For Balogun and Johnson (2005, p. 1576) "sensemaking is primarily a conversational and narrative process (Brown, 2000; Gephart, 1993, 1997) involving a variety of communication genre (Watson & Bargiela-Chiappini, 1998), both spoken and written, formal and informal".

More specifically, sensemaking involves "conversational and social practices" (Gephart, 1993, p.1469). […] Change comes about through shifts in conversations and language (Barrett, Thomas, Hocevar 1995; Brown & Humphreys, 2003; Ford & Ford, 1995; Heracleous & Barrett, 2001). Similarly for Gephart, Topal, and Zhang (2010, p.284-285) - "sensemaking is an ongoing process that creates an intersubjective sense of shared meaning through conversation and non-verbal behavior in face-to-face settings where people seek to produce, negotiate, and sustain a shared sense of meaning".

In this set of definitions, sensemaking is a vitally social process. However, appraising the commonalities and recurrent themes across definitions, Maitlis and Christianson (2014, p. 67) suggest an integrated definition of sensemaking that attempts to include processes from the cognitive perspective: *"a process, prompted by violated expectations, that involves attending to and bracketing cues in the environment, creating intersubjective meaning through cycles of interpretation and action, and thereby enacting a more ordered environment from which further cues can be drawn".*

As an example of sensemaking aligning with a cognitive perspective, Weick's (2005) step by step analysis of the nurses experience in the case of the baby with the patent ductus issue (see Section 2.6.2). highlights how the nurse was guided by mental models acquired during her work and life experience.

Yet despite their suggestion of an integrated definition, Maitlis and Christianson (2014) maintain a preference for a social constructionist approach:

> Sensemaking occurs and can be studied in the discourses of social members—the intersubjective social world—rather than simply occurring in their minds (Gephart, 1993, p. 1470) and is concerned with the conversational and social practices (methods) through which the members of a society socially construct a sense of shared meanings. This approach thus situates both the process of sensemaking and its outputs in spoken language or written texts […]. Through these discursive processes, sensemakers are understood to produce "accounts", "narratives" or "stories" rather than new schemas (Boje, 1995; Brown, 2004; Maitlis, 2005; Martens, Jennings, & Jennings, 2007). (p. 95)

They argue that if sensemaking occurs within a person's head, then collective sensemaking in organisations becomes a process through which more influential individuals episodically persuade others to think as they do. Collective sensemaking may pause when enough members hold a sufficiently shared understanding to act together. However, if sensemaking takes place in and through the conversations between people, collective sense is generated in an ongoing, iterative manner, as actors shape each other's meanings in repeated cycles of sensemaking.

The essence of Maitlis and Christianson's (2014) argument is that a social constructionist perspective better accounts for the continuous, ongoing nature of sensemaking and is thus to be preferred. This fails to account for the disjunctures that occur in sensemaking, primed by violated expectations (Weick et al., 2005). Balogun and Johnson (2005) highlight the importance of interactional processes but also foreground how considering schema emergence can advance the understanding of change processes. "Through this cyclical sensemaking process, earlier schemata and outcomes become the ground for subsequent sensemaking through the mediation of social processes of interaction, in a pattern similar to the structuration process of institutionalization proposed by Barley and Tolbert (1997)".

Treating sensemaking as a dynamic process of emerging schemata through talk-in-interactions - where old schemas impact subjective interactions, which in turn shape emerging schemas, as conceptualised by Balogun and Johnson (2005, p.1588), resolves the either/or conflict, demonstrating that sensemaking can benefit from both cognitive and social constructionist perspectives. Research seeking to tackle the dual challenge – advancing theoretical understanding and creating viable practitioner instruments – may find much to build on in such hybrid approaches.

2.7.2. The relationship of sensemaking to other perspectives

In line with a social constructionist perspective, Rouleau (2005) and Sonenshein (2010) claim that sensemaking/sensegiving are interchangeable with constructing narratives. The unifying concept here is the notion of influence. Sensegiving is often studied in the context of how organisational leaders or managers strategically shape the sensemaking of organisational members through the use of symbols, images, and other influence techniques (Gioia & Chittipeddi, 1991; Maitlis & Lawrence, 2007; Rouleau, 2005). Rouleau (2005) notes that sensegiving is concerned with leaders' attempts to influence the outcome, to communicate their thoughts about the change to others, and to gain their support. Some scholars note that actors at any level of an organisation, or outside its boundaries, may engage in sensegiving with others (Maitlis & Lawrence, 2007).

This definition of sensegiving has a strongly discursive, rather than cognitive focus. Nevertheless, such a notion of sensegiving could also be characterised as an attempt to influence the mental models and change beliefs of actors through interactions, which permits a social cognitive viewpoint, again suggesting that integrating cognitive and discursive approaches may enhance understanding.

Sensemaking and sensegiving in some form underlie all storytelling, discursive and schema-change approaches to understanding organisational change. For this reason, there are significant commonalities in their strengths and weaknesses, as the next section outlines. The section will not repeat discussion of the strengths and weaknesses of cognitive and discursive approaches outlined in the review of those themes, but be limited to fresh aspects.

2.7.3. Strengths and weaknesses of the sensemaking approach

The following three strengths are identified from the sensemaking approach.

Sensemaking encourages a strong process ontology (treats micro-level processes seriously)

Micro-level processes such as noticing, bracketing, labelling, and communicating are highlighted as crucial during sensemaking (see the earlier nurse/baby example from Weick et al. (2005)). Illuminating these places attention on the processes underlying the reweaving of actors' beliefs, rather than on shifts between states. It transcends the surface-level of stories or narratives to start identifying the sub-processes of change, pointing out action-meaning cycles that assist understanding of how people make meaning and rationalise violated expectations (Maitlis & Christianson, 2014). These are approaches which can potentially assist in cracking the code.

Sensemaking identifies initial conditions or key triggers (e.g. cues and equivocality)

Sensemaking isolates the initial conditions that trigger change processes. The majority of the papers reviewed align with Tsoukas and Chia's (2002) notion of change as an ongoing phenomenon. However, the sensemaking process is triggered by cues – often violated expectations when "members confront events, issues, and actions that are somehow surprising or confusing" (Maitlis, 2005, p. 21), prompting a need for explanation. Maitlis and Christianson (2014) highlight some trigger events such environmental jolts, organisational crises, threats to organisational identity and planned organisational change.

This focus on triggers is important as it permits researchers to track events starting from the trigger, through the ensuing sensemaking and sensegiving processes. Researchers can thus link events to outcomes and in the process develop a process theory of change (Van de Ven, 2007).

Sensemaking can accommodate other research perspectives (e.g. storytelling, discursive and cognitive approaches)

The three previous approaches can all be "housed" within a sensemaking perspective (Weick, 2012). The approaches are congruent and contribute to a social constructionist paradigm, with interactions between actors important in the meaning-making process. This permits the sense-making paradigm to build on the strengths of other perspectives, for example, the understanding of power and hegemony, or the role and nature of communication.

Similar to the previous approaches to change, although numerous strengths of the sensemaking approach are highlighted, six key challenges persist which present theoretical and methodological opportunities for future research.

Insufficient attention to power dynamics during sensemaking and sensegiving

Only a limited number of studies have drawn attention to the issues of power dynamics during sensemaking and sensegiving processes. These include McClellan (2011), Dawson & McLean (2013), who have raised awareness of competing stories, and Näslund & Pemer (2012), who discuss dominant stories. Researchers thus still lack theoretical perspectives on phenomena such as disagreements, struggles, squabbles, politicking and their outcomes.

Richer theoretical explanations of these can enhance understanding of the micro-level processes of change (including intra-personal processes). This absence suggests a need for current researchers to unpack actual change debates and conduct fine-grained analysis of these.

Inadequate attention to the skills and competencies required during sensemaking and sensegiving
Surprisingly few papers mention or raise the importance of sensegiving skills, although Preget (2013) stresses the need for a better understanding of interactional skills. A linked aspect would be to interrogate the effect a lack of proposed sensegiving skills has on processes of change.

Shortage of real-time, first-hand accounts
Few of the papers reviewed provide a real-time account over an extended period of time of change. Although there are some accounts over extensive periods (e.g., Van der Heijden, Cramer, & Driessen, 2012), cases are often synoptic and studies retrospective. This may derive from practical constraints such as the difficulties of access.

However, when data collection happens through discrete interviews or the sporadic gathering of real-time data (e.g. via participant observation) at different points in time, this hampers what is really needed for insight: a continuous flow of fine-grained information about sensemaking or sensegiving in real-time. This may provide a robust argument for the role of a participant researcher who can constantly monitor and record interactions.

Insufficient attention to informal conversations
Few of the studies reviewed provide data on actual offline and informal conversations that contribute to and influence meaning-making, decisions and choices. Yet these informal conversations between key political actors form part of the process of sense-making and decision-making. Again (with appropriate safeguards) a participant researcher is in the strongest position to observe and incorporate these into the data.

Failure to position sensemaking and sensegiving among other change processes
Sensemaking and sensegiving are not the only processes of change. Few papers consider the others. One exception is Blomme (2012), who reviews the sensemaking and Actor Network Theory perspectives to conceptualise planned change. Blomme (2012) identifies 4 main translation stages (*opinion-forming, introduction, influencing*, and *acceptation*). However within these stages other processes play out, illustrating the layered nature of processes. One example is what happens during assemblage (the mutual influencing and creation of agency, Latour (2005)). Actors appear to be acting as a single body, and *punctualisation* then occurs: multiple networks are perceived as represented by a single actor. This is only one example of the kinds of sub-processes that can shape macro-level processes such as influencing (read sensegiving) and acceptation. Again, a detailed, fine-grained observation process is required to identify these complex web of processes, and very little of such work has been reported so far.

Insufficient utilisation of social cognitive theories (e.g. dissonance theory)

Lastly, as noted under the previous theme, although conditions such as heightened disagreement, tension, conflict, violated expectations are often cited as key triggers for the sensemaking and sensegiving process, social cognitive theories (such as dissonance theory) are too rarely employed to explain such phenomena.

2.7.4. Conclusion of sensemaking approach

The sensemaking perspective begins to capture some of the key sub-processes of change. It draws attention to initial conditions such as surprising events and violated expectations, which present research opportunities to track the flow of events over time. The literature suggests that both cognitive and discursive approaches to sensemaking can advance change theory, particularly since the sensemaking perspective is congruent with – and may possibly subsume – other perspectives such as storytelling. However, a research design needs to be developed that addresses the weaknesses of the approach.

2.8. Theme 5: Routines and practices

The fifth theme identified is that of change happening through shifts in routines and practices. First, routines and practices are contrasted. Second, the underlying theoretical assumptions of this approach are critiqued and lastly the strengths and challenges of the approach are assessed.

2.8.1. Defining routines and practices

Scholars such as March (1981), Orlikowski (1996) and Feldman and Pentland (2003) argue that it is the essential and daily dynamics of organising that produce incremental and continuous change. As evidenced by Feldman (2004) this slippage in routines can impact organisational schemata and bring about change. March (1981, p. 575) claims that organisational change is often the result of conventional routine activities. Orlikowski, (1996, p. 66) similarly supports the view that change occurs through recurrent and reciprocal variations in practice over time.

Feldman and Pentland (2003, p. 113) argue that change happens through selective retention of variations in performances of organisational routines. Incremental change occurs as actions (in the form of routines), schemata or resources change (Feldman, 2004, p. 304). Thus unlike the emphasis on shifting stories, or talk, or mental models or meanings-through-interactions, the emphasis of this approach is on change occurring through quiet shifts in everyday routines and practice.

Rerup and Feldman (2011) define organisational routines, such as budgeting and recruiting as "repetitive, recognizable patterns of interdependent actions, carried out by multiple actors" (Feldman & Pentland, 2003, p. 95) that constitute organisational skills (Cohen & Bacdayan, 1994; Nelson & Winter, 1982). Routines are fundamental for accomplishing work in organisations (Zbaracki & Bergen, 2010).

Smets et al. (2012) define practice as patterns of activities that are given thematic coherence by shared meanings and understandings. Separately, these activities may appear trivial, but together they have meaning and order because of their common purpose and of how specific activities should be done (Jarzabkowski, 2005). The practice perspective, thus, focuses not just on the doing of work, but on the "shared practical understanding" that gives it meaning and makes it robust (Schatzki, 2001, p. 2). Further, those shared understandings, though "local," are informed by broader cultural frameworks, that is, by overarching institutional logics (Jarzabkowski, 2008; Lounsbury & Crumley, 2007). Practices, in this sense, are the material enactments of institutional logics (Sahlin & Wedlin, 2008).

From the above definitions, both routines and practices are fundamental for getting work done, are under the influence of social constructions (shared meanings) and are embedded in common daily activities. However practices are embedded in larger frameworks of meaning (by institutional logics) that define parameters for how things should be done. The approach from the perspective of changing routines and practices provides a refreshing perspective on how everyday locally based activity can be the locus for changes. This aligns with the theoretical notion that change is not a special epiphenomenon of organisation, occurring episodically but can occur through everyday activities. The approach acknowledges that organisational routines are ubiquitous and creates awareness and appreciation of their contribution to organising and becoming (Rerup & Feldman, 2011).

Four distinct theoretical assumptions underpin the routines and practice approach. First, the routines and practices approach to change raises the importance of change happening in the daily toils of everyday work, embedded in particular contexts (Jansson, 2013; Rerup & Feldman, 2011). Change within this perspective is conceptualised as occurring because of slippage in routines that may occur through trial-and-error learning (Feldman, 2004, Rerup & Feldman, 2011).

As argued by Smets et al. (2012) change occurs because "most of the time most people in an organization do what they are supposed to do; that is, they are intelligently attentive to their environments and their jobs" (March, 1981, p.564). By contrast to other paradigms usually associated with externally driven shocks (e.g., regulatory changes), it is the occurrence of a work-level crisis that precipitates practice- driven change.

Unlike in the sensemaking approach which suggests necessary cues created through, for example, violated expectations that trigger change processes, the routines and practice perspective approaches change through the pervasive pressure to "get the job done" (Feldman, 2004). This approach remains underexplored (also confirmed through this literature review), yet has the potential to demonstrate the mechanisms by which such practice-driven change emerges from day-to-day work, consolidates within an organisation, and may radiate to the level of a field as shown in the case by Smets et al. (2012).

Second and linked to the above, change is seen as an incremental/emergent phenomenon rather than an occasional/sporadic one (Feldman, 2004). This challenges traditional paradigms where planned change is seen as dramatic disruptions of the status quo. Rather, the generative mechanism for change is, for example, situated improvising (Rerup & Feldman, 2011) — that is, localised attempts to cope practically with novel complexities and accomplish specific tasks (Orlikowski, 1996; Tsoukas & Chia, 2002). The practice approach re-iterates the ongoing continuous nature of change (Langley et al., 2013) and replaces the struggle and noise typical of other theories of change (Smets et al., 2012).

Third, from a critical practice perspective Jansson (2013) challenges the perspective that resistance to change is related to the planned change itself. Rather, resistance is conceptualised as resisting human action, power, or practitioners holding the power (Erkama, 2010; Thomas & Hardy, 2011; Vaara & Tienari 2011). This is a unique and refreshing perspective as resistance is not conceptualised as a stable attitude which if addressed upfront through attempts to improve readiness to change (Oreg, Vakola, & Armenakis, 2011) reduces or eliminates resistance. Resistance from a critical practice perspective is treated more complexly.

Feldman (2004) demonstrates how building directors were supportive upfront for changes to routines (such as new hiring or training routines) and later as schemata changed as a result of new routines and resources, the building directors no longer supported the change. Interestingly their

reduction in power was not emphasised as a reason for the reduced support, as posited by the critical practice perspective. Nevertheless, resistance is seen as *opposing people* rather than the *content* of change, which is a stimulating perspective that may bring new insight in addressing the dual challenge.

Fourth, a critical practice perspective Jansson (2013) also probes the taken for granted assumption that change practitioners act upon their organisational hierarchical groupings. In contrast change practitioners are seen to act upon non-traditional actors and factors. Smets et al. (2012) demonstrate this well by showing how Justitia, an Anglo-German internationally integrated law firm, influences other actors in the network (e.g., fellow practitioners and associations) rather than just traditional actors (e.g., regulators in their case). This presents a unique conceptualisation and prompts including other non-traditional actors as part of understanding how change happens.

These theoretical assumptions lead to numerous strengths. These, together with weaknesses of the approach are analysed next.

2.8.2. Strengths and weaknesses of the routines and practices approach

Challenges the illusion of control and predictability of outcomes

Unlike traditional approaches which emphasise planning by those at the top, which suggest control of the change process (e.g., Kotter, 2008) or separation of planning from implementation, the shift-through-practice-and-routines approach overcomes the illusion of control. Feldman (2004) for example demonstrates robustly in her case that control is illusory. In her longitudinal analysis Feldman (2004) draws out the dynamic of how changing routines lead to new schemata, which create new resources, which in turn create new routines.

Practically, these outcomes could not be controlled or predicted. More specifically, as students were trained to become specialists (through new training routines) rather than calling on building directors (old schema to manage issues) to resolve student issues (such as bulimia), the specialists (new schema) were invoked which created change. The main point is that changing routines through reviewing everyday practice, reweaves actor's webs of belief and habits of action. These changes were not planned upfront. They happened through gradual changing of schemata from changing routines. Unanticipated consequences are to be expected (Rerup & Feldman, 2011).

In line with an illusion of control, this approach challenges, for example, the notion that an old vision or schema needs to be reduced before a new one is instilled (e.g., Gioia & Chittipeddi, 1991). Rerup and Feldman (2011) show empirically that organisations can sustain a generative tension between alternative interpretive schemata by developing ways of influencing routines, such as the ambassador model in their case, that incorporate the many different actions that organisational participants have worked out through trial-and-error learning.

Emphasises praxis (thoughtful practical doing) and phronesis (practical wisdom) by actors involved

Often, change is presented as something profound and difficult to achieve, requiring top management input. Practical actions to resolve issues by managers *in situ*, are not emphasised enough to highlight the connection between practical doing and resultant change in actors webs of belief and habits of action (Burgelman & Grove, 2007). A practice approach foregrounds praxis and phronesis.

The case by Rerup and Feldman (2011) demonstrates how by thoughtful practical doing and trial-and-error learning, praxis and phronesis can explain, for example, the connection between routines and new organisational schemata. In the case of the new learning lab, by improvising through practical doing, and learning through trial-and-error new routines were born and espoused schemata enacted. What is important is that the process of improvising and coming up with solutions to attend to locally situated problems is part of the processes of change.

Rises above surface level data and abstracts processes of change

All of the three empirical studies reviewed aligned with practice perspective captured rich, thick data over prolonged periods of time. For example Feldman's (2004) study extended over 4 years and Smets et al. (2012) over three years. The researchers though did not stop by merely presenting surface level data in the form of stories or narratives over years. Each are exemplars of studies, embedded within theoretical perspectives (e.g., Giddens structuration or Bourdieu's practice theory) to carefully explain more abstractly the processes of change. The dynamics of processes captured through theoretical constructs are brought to the forefront.

For example Smets et al. (2012) elegantly explains that when three precipitating dynamics—*novel institutional complexity*, *urgency*, and *consequence*—are jointly experienced in everyday work; they activate a chain of core mechanisms that span individual, organisational, and institutional levels. They label these core mechanisms *situated improvising*, *normative network reorientation*, and

unobtrusive embedding. They also identify two organisational properties— the *impulse of organisational coordination* and the *capability for institutional distancing*—that enable and amplify the effects of these core mechanisms. Thus a clear strength of the approach is to draw out the processes of change. It must be noted though that these processes do not involve the personal micro-level but rather impersonal macro-levels processes. To advance the dual challenge addressing processes across levels is important.

Links different levels of analysis

A strength tied to the previous strength is that apart from discovering processes of change, linking processes across levels of analysis is once again beautifully demonstrated by the Smets et al. (2012) case. This is important as it builds the understanding of how change happens. It makes the connection between practice level micro-dynamics to field level change. It shows that system level changes can occur through gradual reweaving at the micro-level. Gentle shifts to how things are done can have massive consequences at organisational and field level.

More work similar to these cases is required if the call to understand the "vision of the far and the scattered alike" is to be answered. The encouragement for better understanding of micro-level processes is supported by scholars such as Barley (2008). There have been repeated appeals for scholars to give greater attention to the micro-level processes of institutionalisation. Barley (2008) lamented that:

> Everyday life is institutional theory's coalface…for over 30 years, the coalface has lain largely idle while institutionalists have sought their fortunes in the cities of macro social theory. As a result, there is plenty of coal left to mine. What we need are more miners.(p. 510)

Raises the importance of power, conflict and tension

As already noted, within the critical practice perspective, power is central to understanding change and resistance. Struggles, visible or not, are everywhere (Foucault, 1988). However it is too easy to simply think of resistance as linked to change but miss the link to actors resisting other human actors. As argued by Jansson (2013), change resistance is thus a competition about power, about who gets to decide or who has the authority over others. As seen from the Feldman (2004) and Rerup and Feldman (2011) cases, resistance is not a static phenomenon. In the Feldman (2004) case, building directors were all for the change to routines but started to freeze positions and do things on their own as new schemata and actions were enacted by the students and administrators.

The analysis now turns to the weaknesses of the routines and practice approach

Shortage of empirical papers

From the papers included in this approach, only 3 empirical studies were noted over the last 15 years. As noted, the approach has numerous strengths which challenge traditional approaches. Such a shortage of studies is surprising given the strengths within the approach, such as focusing on everyday activities, routines and practices.

Prolonged engagement in the field

A possible issue related to the shortage of papers may be the practical challenge of prolonged time required in the field. A review of the methods used reveals that multiple interviews, participant observation and review of historical artefacts all consume time. All of the empirical studies point to required patience and lengthy periods in the field in order to identify routines and practices. This may deter researchers from this approach.

Under specification of practice related practical suggestions

A major weakness related to the practice approach is the practicability of the findings. Although the empirical findings provide some insight into the processes of change these processes are still described at the macro level (see Rerup & Feldman, 2011). A practicable theory that helps practitioners understand how to approach change remains underspecified.

The approach remains silent on the day-to-day, engagement-by-engagement implications for actors. If change is situated in everyday practice, the suggested tools, techniques, methods involving different practices e.g., communicative, facilitative, negotiation practices involving routines such as project management and design should be better specified (a good example from the design science perspective is Van Aken (2007) who specifies design practices that should be incorporated when considering change processes).

2.8.3. Conclusion to the routines and practice approach

The routines and practice approach emphasises change through gentle and quiet shifts in everyday practice. From a critical perspective, phenomena such as resistance are reconceptualised. Strengths include understanding change over long periods of time and in crossing levels of analysis.
Like some of the approaches previously covered, the main challenges remain significant shortage of empirical studies and need for greater elaboration of practical implications.

2.9. Theme 6: Complexity based approach

The sixth and final theme aimed at explaining how change happens is complexity theory. First, how complexity theory challenges conventional change theory is appraised. The theoretical underpinnings of complexity theory are thus critiqued. Next, the related strength of this approach contributing to better understanding of the emergence of change is analysed and lastly the weaknesses (problems and gaps) within the approach are evaluated.

2.9.1. Defining complexity based (non-linear) approaches

Over the last two decades complexity theory has advanced the theoretical understanding of how change happens through positing of non-linear dynamics (Brown, 2012). Complexity conveys rich, dynamic, evolving interactions of simple elements (Cilliers, 1998, 2007) that may generate novelty or emergence in a system (Lichtenstein & Plowman, 2009; Snowden & Boone, 2007). Marion and Uhl-Bien (2001), for example, suggest that change happens through micro-dynamics such as *correlation*, *interaction* and *randomness*. Actors mobilise by *correlating* (the emergence of common understanding in interacting systems as result of the product of accommodations that evolve when different people or groups struggle to work out conflicting constraints that inhibit their need preferences), *bonding* (becoming linked by need, preferences, outlooks, responsibilities, etc.), *resonating* and *aggregating* (forming social cliques).

Uhl-Bien and Marion (2009) point out that through contrasting and *heterogeneous schemata* (needs, beliefs, assumptions, and values), *dynamic interaction/engagement*, *interdependency* and *adaptive tension* actors negotiate and reweave new beliefs and habits of action. Thus, in the dynamic process of interdependent engagement lies the potential for emergence (e.g., new and novel ways of thinking and acting).

Lichtenstein and Plowman (2009) draw from previous case studies to analyse and demonstrate this emergence. For example, in a church structure that was stagnating, new suggestions aligned with the needs of a few church-goers, triggered interactions over time that led to the ultimate revival of the church and increasing fellowship. However this emergence of novel ideas and solutions has been challenged by other researchers such as Houchin and MacLean (2005).

In their case even though actors espoused an organisation that intended to be at the cutting edge providing value added services, actors go back to what they know and are familiar with and seek for equilibrium/stability. The case though makes the assumption that a disequilibrium condition is sufficient for achieving emergence.

Unlike Lichtenstein and Plowman (2009) who highlight the importance of a Tension and Threshold state, Houchin and MacLean (2005) acknowledge the importance of actors anxiety which they recognise and suggest needs to be researched more intensively but do not incorporate tension at a more macro-level. Thus whereas self-organisation and emergence have been challenged, the conflicting results need to be addressed through further empirical work.

The shortage of empirical studies threatens to see complexity theory remaining as abstract, with limited empirical backing (du Gay and Vikkelsø, 2012). From the review of the papers included in the review, complexity theory provides a unique perspective to understanding how change happens. The nine strengths and three weaknesses related to this approach are analysed in more detail next.

2.9.2. Strengths and weaknesses of the complexity approach

Draws attention to the processes of change and complex patterns

The first key strength of the complexity approach is its intense emphasis on processes of change. These processes have the ability to explain dynamic behaviour. Rather than overemphasising change as shifts to particular states, complexity theory seeks out the social processes that bring about change. This focus on identifying processes is what scholars such as Tsoukas and Chia (2002) and more recently Langley et al. (2013) have been calling for in order to better grasp how change happens.

Langley et al. (2013) point out that processes can be viewed from different ontologies of the social world: one a world made of things in which processes represent change in things (grounded in a substantive metaphysics) and the other a world of processes, in which things are reifications of processes (Tsoukas & Chia, 2002), thus grounded in process metaphysics. Depending on the particular process ontology espoused, change may be modelled as motion and, thus, viewed as change in the qualities of substantive things over time, or as enacted through a matrix of interwoven processes.

Research questions focusing on how the qualities of an entity (e.g., an individual, group, organisation, institution) change over time may be studied from the perspective of a substantive metaphysics in which processes represent changes in things. Other research questions that focus on how processes themselves (sensemaking, bonding, aggregating etc.) emerge are compatible with a process metaphysics in which the focus is on how processes (rather than things) unfold over time (Langley et al., 2013, p.6; Rasche & Chia, 2009).

Cilliers (1998) and Uhl-Bien and Marion (2009) strengthen the case for complexity theory aligning with a strong process ontology in referring to mechanism-based theorising. They argue that these mechanisms are dynamic behaviours which occur within the system and include for example resonance, aggregation (e.g., of people and ideas), bonding and accreting nodes (ideas that rapidly expand in importance and which coalesce related ideas). Mechanism based theorising overcomes the limitations of variable based approaches and helps build dynamic process theories (Davis & Marquis, 2005). These findings motivate following strong process ontology to advance the dual challenge (Chiles, 2003; De Cock & Sharp, 2007).

Schneider and Somers (2006) point out that mechanism-based theorising challenges reductionism (refers to research logic in which parts of a system are isolated and studied independently of the system from which they derive—the general idea is that, if one can understand the parts, one can draw conclusions about the whole). Cilliers (1998) cautions though that mechanism-based theorising cannot predict outcomes with certainty because too many actors interact in complex ways within social systems. However, it is possible to identify common dynamical patterns (or mechanisms) that drive different dynamical events. Tsoukas and Dooley (2011, p.729) similarly support this view, "a complex practitioner sees patterns, says Weick, a less complex one misses". This formulation is, in effect, a variation of Ashby's law of requisite variety, which Weick often refers to in his book: only complexity can cope with complexity.

This emphasis on pattern finding and processual dynamics is applauded and theory has been advanced in highlighting dynamics such as *aggregation* and *meta-aggregation* outlined by Marion and Uhl-Bien (2001) or *entanglement* (processes where enabling leadership trades or negotiates with administrative leadership to enable emergence) as posited by Uhl-Bien and Marion (2009). However, none of the empirical studies included in the review (e.g., Ford, 2010; Philippidou, Karegeorgiou, Tarantlilis, Soderquist & Prastacos, 2008) attempts to understand how these mechanisms happen in more detail. They apply complexity theory concepts broadly to validate

rather than challenge or broaden the theory. More refined theorising through empirical studies on how some of the mechanisms emerge, grow or decline remains a gap in advancing the dual challenge. This shortage of empirical studies aligned with process ontology opens a fertile avenue for subsequent research.

Promotes meso-level theorising

Tsoukas and Chia (2002) strongly emphasise that not enough is known about what happens within and between the phases of change. Few research studies attempt to link the micro-level mechanisms to macro-level outcomes (i.e., linking micro-dynamics to phase outcomes). One exemplar is the study by Lichtenstein and Plowman (2009). They draw on secondary data of three cases of emergence. Their approach is reflective of calls for a meso-model of leadership (Osborn, Hunt & Jauch, 2002) in that it accounts for both behavior and context in understanding organisational phenomena (House et al., 1995). Specifically, their meso-level theory describes tangible (micro-level) leadership behaviors (such as encouraging novelty through promoting rich engagements) that can be enacted by any organisational member; these behaviors lead to four contextual (macro-level) conditions which have long been associated with emergence (McKelvey & Lichtenstein, 2007; Prigogine, 1989).

Although such meso-theorising is inspiring, Uhl-Bien and Marion (2009) point out that mechanisms are meso-level dynamics. No research was found within the review that probed meso-level dynamics involving mechanisms such as bonding or aggregation and linked these mechanisms to phase-level outcomes. Whereas Lichtenstein and Plowman (2009) home in on tangible behaviours, much more can be done to develop a fine- grained understanding of how meso-level dynamics happen and influence phase outcomes. Importantly though, complexity theory is well positioned to support meso-level theorising. A strong case is made by Lichtenstein and Plowman (2009) for more open-ended, real-time, longitudinal qualitative studies.

Complexity theory can be utilised in conjunction with phased approaches to change

A third strength of complexity theory relates to reconciling the misnomer that a Lewinian phased approach is incompatible with complexity approaches. Some scholars (Styhre, 2002; Prastacos et al., 2008) criticise the Lewinian approach claiming it to be linear, mechanistic and favouring stability. Burnes (2004) carefully analyses Lewin's (1947, 1951) assumptions and philosophy of change along 4 elements which comprise planned change, namely, *Field Theory, Group Dynamics, Action Research* and the *3-Step model*.

He argues by demonstrating alignment between the 4 elements and 3 issues important to complexity theory, namely, (i) *democracy and power equalisation*; (ii) *a third kind of change between incremental and radical change* (one that is continuous and caters for self-organisation) and (iii) *order generating rules*. Burnes (2004) demonstrates that Lewin's approach to change has much common ground with complexity theory.

What is important is that a stage approach to change cannot be read in isolation from Lewin's other works. The observation by Burnes (2004) is supported by Uhl-Bien and Marion (2009) who note the overlap of Lewin's work with complexity theory. For example the authors reflect that:

> Lewin (1952), perhaps foreshadowing complexity, explored ways that informal behaviors could be manipulated to create change. More recently, critical theorists, building off this early work, describe the relationship between formal and informal structures as conflictive, with elites in formal roles seeking to suppress workers in the informal dynamic (Jermier,1998). We, however, do not see this informal dynamic as a nuisance or as part of a conflictive struggle; rather, in the spirit of Lewin (1952), we see it as something to be nurtured and enabled. Like Lewin, we see it as a valuable force for effective change. Unlike Lewin, we do not think this force can be (or should be) managed, but rather its potential should be fostered toward the objectives of the organization. (p. 633)

As noted, Lichtenstein and Plowman (2009) demonstrate how embedding behaviours within a phase approach enables "seeing the forest and the trees" (Jones & Corner, 2012). Complexity theory therefore is not incongruent with embedding mechanisms within phased approaches. What remains exciting for consequent research is empirically challenging the conception of the linear progression of phases.

As noted by Houchin and MacLean (2005), their case did not result in emergence. Two interesting possibilities for why this was so could be inferred from the study of Lichtenstein and Plowman (2009). The particular behaviours per phase were not present and secondly an amplifying tension was not reached. This remains speculative and succeeding research needs to assess the assumption of the linear progression of phases of change.

Leadership is conceptualised as a relational process
Fourth, complexity leadership theory (CLT) challenges the traditional heroic, romantic view of leadership, where individual leaders are seen as the "brains at the top" and who have the capability to control and manage change (Hunt, 1999; Jennings & Dooley, 2007; Marion & Uhl-Bien, 2001).

Uhl-Bien and Marion (2009) argue that within complex systems it is difficult to attribute change to individual leaders: leadership acts emerge in different networks each at their own level. Local acts can produce small or bigger changes (referred to as the *butterfly effect*) in other aspects of the system or in the system as a whole. The strength of complexity theory is that it draws attention to the interactions and processes, rather than individuals (usually top management). This does not imply that there is no place for agency (influence) of actors on processes.

Uhl-Bien et al. (2007) propose three leadership functions: *administrative, adaptive*, and *enabling* leadership. Multiple actors can exhibit any or all three of these leadership functions (Nooteboom & Termeer, 2013). Under CLT, leaders therefore serve as *tags* (identifier and catalyst for a valued set of behaviors) and influence other persons and processes. They frequently lead without authority and often do so in a temporary capacity (Brown, 2011, 2012; Schneider & Somers, 2006). What is unique about the CLT perspective is that it acknowledges that tensions within the system need to be nurtured and resolved. Administrative leadership is required to entrench new ways of thinking by going back to embed processes within the existing structures, whilst enabling leadership enacts the behaviours (such as those analysed by Lichtenstein and Plowman (2009)) to enable adaptation and emergence). Although the CLT approach inspires a triadic theoretical perspective on leadership embracing the importance of leadership as a process, much more empirical work needs to be conducted to observe these behaviours in action.

Further, in some cases (Ford, 2010) the emphasis is only on positive behaviours, as reflected in the frameworks by Marion and Uh-Bien (2001) and Lichtenstein and Plowman (2009). CLT is silent on negative behaviours (e.g., badmouthing actors, only seeing matters from one perspective, etc.) yet cases are filled with examples of such behaviour (Beech & Johnson, 2005; Dawson & MacLean, 2013) and the behaviours impact on outcomes over time. These behaviours cannot be ignored. These findings offer promise for following research which should broaden the CLT perspective by also including issues of power and hegemony rather than remaining unconcerned with differential power amongst system elements (Fenwick, 2010).

Complexity theory challenges notions of predictability and control
Fifth, from the above reviewed strengths it is also clear that complexity theorists believe that the illusion of accurate prediction and control enchants and traps practitioners into believing that change can and must be managed (Anderson, 1999; Brown, 2012). Complexity theory embraces novel unpredictable emergence. New ways of thinking and acting can emerge as actors engage and influence each other. Thus, another strength of complexity theory is to overcome the logic of

certainty, which again emphasises the importance of ongoing interactions. Schneider and Somers (2008) point out that complexity theory challenges determinism. Determinism is the belief that all events are caused by preceding events and that by knowing the preceding variables one can predict the future with certainty. Prigogine (1997) calls this ''the Logic of Certainty'' (Marion and Uhl-Bien, 2001). Within complexity theory slight shifts in initial conditions can lead to very different outcomes (Brown, 2012).

Evidence of the lack of predictability, control and certainty is highlighted through a number of cases. For example, Balogun and Johnson (2005) show how planned interventions lead to unanticipated and unintended outcomes. Similarly Styrhe (2002) presents a case study of organisation change in a Swedish telecoms company, Telco. Evidence from the case demonstrates that top management were committed to changing the culture of Telco towards a more inclusive and empowered culture. They invested in training programmes and a new work environment where colleagues could interact and share ideas. Even free fruit during lunch was distributed to encourage engagement. However unforeseen issues such as delays in product design and a shift in demand due to the "911" related attacks resulted in the reverse of what was expected from the change programme. Due to unexpected declines in financial performance, employees had to be let off, resulting in rapidly declining loss of faith in the change programme. This case demonstrates the non-linearity of change.

This supports MacKay and Chia's (2013) recent argument and analysis of the closure of Northco automotive. As demonstrated in the case organisations become trapped by the very decisions that they make and underestimate the dynamism of ongoing change. Choices made can create future traps that lead to unanticipated consequences due to chance events. The above supports complexity theorists' argument that change cannot be planned upfront, neatly predicted and controlled by top management. The implications are that an interactional perspective to change where conditions such as heterogeneity of ideas, interdependence of actors means placing rich engagements high up the agenda in making inroads on the dual challenge.

Interactions become the primary focus of attention
As discussed, processes of bonding, coupling, and aggregation are all dependent on conditions of dynamic interaction. A focus on interactions means understanding how conversations happen, how stories are told, how discourses occur, how sensemaking takes place. Interactions become the focus of attention, which promotes a better understanding of what actually takes place during change. Thus a sixth strength of complexity theory is its focus on interactions, which implies a focus on actual communication (including issues of hegemony) within both the formal and informal arenas.

Integrates various other approaches (e.g. narrative, mental models (schemata)) within a single framework

From the above, the seventh strength of the complexity approach is that it easily integrates other approaches. Tsoukas and Hatch (2001) suggest that a narrative approach indicates and supports the logic of complexity theory (Houchin & MacLean, 2005). Schneider and Somers (2006) argue that using Kaufmann's conceptualisation of 'NK' landscape can enhance understanding of how change happens. Through engagements common social identity is created through sharing of common schemata (as covered in the cognitive approach of changing mental models).

Tsoukas and Dooley (2011) provide further support by promoting a style of thinking and an approach to knowledge that views an object of study as complexus - 'what is woven together', in Latin – and, accordingly, seeks to link and contextualise rather than split and isolate. Thus complexity theory may be useful in it's potential to encompass other approaches.

To advance the dual challenge and thereby crack the code, subsequent research can possibly combine narrative approaches, with mental models approach within a complexity based theory. This is strongly supported by Lorino, Tricard and Clot (2011) and Tsoukas and Dooley (2011, p. 733) who suggest greater complexity in the research process by adopting dialogical mediated inquiry (DMI). DMI enables *semiotic mediation* (linking situated experience and generic categorisations), *inquiry* (interweaving logical thinking, narrative thinking and experimentation) and *dialogism* (the interaction of multiple voices and genres).

Theory embraces a practical dimension - practical behaviours are suggested

Eighth, unlike some of the other approaches which were critiqued for not presenting actionable theories that aid practitioners, complexity theory has a tradition of pointing to practical sets of behaviours for practitioners. Examples already cited include 5 practices proposed by Marion and Uhl-Bien (2001) and 9 behaviours suggested by Lichtenstein and Plowman (2009). Where more research is required is explaining even further how these suggestions can be enacted. For example suggestions for creating correlation through language and symbols begs the question of how this can be done and what competencies or skills may be required? As noted, such actionable theories lay the path for cracking the code.

Invites different methodological approaches and methods

Lastly and not least, a final strength of the approach is highlighted by Schneider and Somers (2006) and supported by Tsoukas and Dooley (2011) - the complexity approach is positioned to embrace

non-linear methodologies such as dynamic systems simulation and artificial neural networks. As an example the authors note that dynamic systems simulation may help with better understanding of positive or self-reinforcing feedback loops that generate growth and amplify deviations, negative or self-correcting feedback loops that counteract change, and single and double loop learning, the former in which existing mental models are maintained and the latter which involve the reframing of mental models. This motivates research methodologies that should endeavour to utilise such tools as system dynamic modelling in order to identify complex processes.

Three key challenges are identified within the approach. Some of the gaps and opportunities have also been highlighted in the analysis of strengths.

Critical dearth of empirical studies

Houchin and MacLean (2005) raise the concern of the paucity of empirical studies related to the complexity turn. This is supported by sceptics of complexity theory like du Gay and Vikkelsø (2012), who argue that there is a high level of abstraction with few empirical studies to support proposed theory. From the 105 articles reviewed, only 5 were empirical studies with complexity theory as the underpinning theoretical lens. Subsequent research should attend to this empirical gap. If not, as highlighted by Houchin and MacLean (2005) the theory may lose its credibility due to absence of empirical validation: –

> More empirical research is needed in organizations, as without this complexity theory is in danger of becoming a short-lived linguistic fashion statement. This might then deprive us of the promise it shows as an alternative and integrative set of ideas and insights on the dynamics of pattern development.(p. 164)

Lack of real-time longitudinal studies

As already highlighted, a methodological gap is the paucity of real-time studies related to complexity theory. Some reasons for this are highlighted by Lichtenstein and Plowman (2009). They raise and caution that "there is recognition that longitudinal, multi-level field research is dauntingly expensive and risky, requiring hundreds of hours of effort with uncertain results. Such research tends not to be well supported within universities". Moreover, given the "scientific" norms of predictability (read - multiple regressions on cross-sectional data), such open-ended qualitative studies are often harder to publish (Lichtenstein & Plowman, 2009, p. 627). With this caution firmly in mind, this review suggests that if complexity theory is to be advanced and especially if the processes that make change happen are to be excavated, more real-time longitudinal research is imperative.

Greater adoption and integration of socio-psychological theory required

Based on their findings Houchin and MacLean (2005) strongly motivate that more research needs to look at anxiety and discomfort that actor's may experience. They argue that:

> The study of psychological drivers in management writings on complexity-theory applications is underrepresented, with the exception of the work of Stacey (1996, 2000) and those who work closely with him (Streatfield, 2001; Stacey, Griffin & Shaw 2000; Shaw, 1997). For complexity theory to be really useful to management practice it has to move away from its reliance on exemplars from natural-science systems and embrace theories and principles from psychology and social theory. (p. 164)

Turning to social psychology presents a theoretical gap that requires attention. Given similar findings and observations from other approaches covered in this review (e.g., change through schema-alteration) as well as the observation that there are not enough empirical studies challenging and extending complexity theory, this review endorses the need to turn to psychological drivers at the micro-level.

Insufficient attention to negative behaviours and issues of power

As critiqued earlier, future research should provide more attention to negative behaviours and issues of power. As surfaced by Fenwick (2010):

> Leaders themselves, whether formal, informal or distributed, are constituted and sustained through political positioning and a great deal of ongoing negotiation among power relations. Work organizations are highly contested sites, where the clashing interests of labour and management, or more fundamentally, between labour and capital, can never realistically be construed as simply part of a unitary evolving system. (p. 93)

Although complexity leadership aims to not romanticise leadership, by surfacing positive behaviours only (Lichtenstein & Plowman, 2009) the theory may not be doing enough to unpack other behaviours that play out during change, especially by those in charge. It would be revealing to track the impact of such behaviours over time and across phases. This may provide additional insight into the linear progression (or not) of phases of change.

2.9.3. Conclusion to the complexity based approach

Complexity presents a powerful theoretical framework for explaining how change happens through mechanisms (dynamic behaviors that occur within a complex adaptive system – a system composed of a diversity of agents who interact with one another, mutually affect one another, and in so doing generate novel behaviour for the system as a whole). Complexity theory suggests an appropriate scaffold for progressing the dual challenge. Nine strengths position complexity theory as an ideal theory to underpin the study of change and *"complexify"* the inquiry process by combining for example narratives with dynamic system models. The severe shortage of empirical studies offers a promising research gap, that, if addressed, could help mitigate complexity theory becoming a fad (Ford, 2008, 2010; McKelvey, 1999).

2.10.   Reflection: foundations - the terrain for subsequent research

This section sets the foundations for subsequent research. First, change is explicitly defined. Second, six underlying theoretic assumptions are challenged. Lastly, the gaps drawn from a cross theme analysis and respective theoretical, methodological and empirical gaps derived from the literature review are presented. Together, these lay a robust foundation for advancing the dual challenge.

2.10.1. Defining change

First and foremost, from the review of the various perspectives and approaches, what is meant theoretically by change is often not explicitly clarified. Recent scholarly concerns remain that change theorists often adopt different ontological and epistemological orientations but repeatedly do not make their assumptions clear (Langley et al., 2013; MacKay & Chia, 2013). The theoretical assumptions from various perspectives were not always made clear.

Martin (2000) captures why it is so important that change is explicitly defined. He notes that if we are to build a causal model of change we need a robust definition of change (Beer & Nohria, 2000). A robust causal model as contemplated does not necessarily imply a reductionist or deterministic paradigm with the illusory promise of predictability and control.

Quattrone and Hopper (2001, p.407) note that a dictionary definition of change is – "making or becoming different, a shift from one state, stage, or phase to another" (The On-line Encarta English Dictionary).

In a similar manner, Schmid (2010, p. 456) defines organisational change as "the process that occurs as a result of external constraints imposed on it or as a result of internal pressures that cause alterations and modifications in the organisation's core activity, goals, strategies, structures, and service programs" (Packard, 2013). These definitions remain ontologically tied to a worldview in which it is presumed that it is social entities, things such as organisations that change. Change then by default, is construed as that which happens *to/in* an organisation. This is, however, not the only way to theorise change, and by implication how change ought to be managed (Chia, 2014).

A definition that aligns with social cognition is provided by Martin (2000). To change is to take different actions than previously. To take different actions than previously means to make different choices. Different choices produce change. The same choices produce sameness, a reinforcement of the status quo. Further there must be a distinction between espoused theories and theories-in-use (Argyris, 1991, 1994, 2004). To espouse a different principle from the past (e.g., we have decided to become customer focused) does not represent change. Only if different choices lead to action on the different operating principles, will change be produced (Beer & Nohria, 2000).

Tsoukas and Chia (2002) offer the view that change is the *reweaving of actor's webs of beliefs and habits of action to accommodate new experiences obtained through interactions*. In so far as this is an on-going process, which is to the extent actors try to make sense of and act coherently in the world, change is inherent in human action, and organisations are sites of continuously evolving human action. Ontologically, this conception of change aligns with the Heraclitan notion of "never dipping your feet in the same river twice". There are no definitive features to the entity undergoing change. Thus the entity (be it an organisation, an individual or a state of mind) does not have well defined characteristics at point 'A' that change when the entity becomes something else at point 'B'. It is not assumed that the process takes place in a linear and predictable manner. The processes involved in on-going change are emphasised (Langley, Smallman, Tsoukas, & Van de Ven, 2009; Quattrone & Hopper, 2001).

The definition though is tied to an individual and group level of analysis, the reweaving of actors' webs of beliefs…through interaction. It does not explicitly reflect the organisational level shift in choices. As argued by Martin (2000) and MacKay and Chia (2013) change requires shift in choices and it is argued here that these changes in strategic choices need to reflect at the group and organisational level. This argument is similar to Lewin's (1947, 1951) in that shift in choices at the group and ultimately organisation level is necessary for change to happen.

Based on the reflection from the different approaches reviewed above, the following definition of organisation change is proposed here to guide the empirical study to follow: it is the ***reweaving of actors webs of belief (shift in sentiments) and habits of action (shift in routines), which occurs fundamentally through (formal and informal) sensemaking and sensegiving engagement/interaction, that leads to ongoing shift in choices by the organisation, with intended and unintended consequences.***

Such a definition embraces process ontology, maintains the importance of individual micro-level focus but draws attention to organisation-level (whilst maintaining change as enabling organisation becoming). It also draws attention to choices which may have intended and unintended consequences. The unintended consequences align with MacKay and Chia's (2013) notion of unowned processes that cause unintended consequences.

A better understanding of how and why change happens means developing a better understanding of how and why reweaving of beliefs and actions occur, how sensemaking and sensegiving occur, how interactions occur and how these shape choices made by the organisation. How these choices lead to consequences must also be better understood.

2.10.2. Challenging underlying theoretical assumptions

In order to advance the dual challenge, some underlying theoretical assumptions are critiqued and challenged. As argued by Sandberg and Alvesson (2011) rather than gap-spotting, one way of furthering theory development is to challenge current theoretical assumptions. Thus, after review of the various perspectives, six theoretical assumptions are problematised.

The first is the traditional notion that change can be controlled by top management, who have all the answers at the outset. They are the brains and the rest of the organisation is the body that must execute well-conceived plans. The notion that careful planning of an envisioned end state can lead to controlled successful change is an unsupported assumption from the literature review.

The second theoretical assumption has already been critiqued in Chapter 1 – that of change processes being linear. Change is not guaranteed by following simple, linear step models. Attention must be given to the nature of organising and becoming.

Aligned with the philosophical orientation of scholars such as Weick and Quinn (1999); Quattrone and Hopper (2001); Tsoukas and Chia (2002), and Chia (2014), organisations are sites of continuously changing human action, and organisation is the making of form, the patterned unfolding of human action. Change is not an exceptional or special activity individuals undertake, as one might be tempted to think from the perspective of stability. The premise is that change is pervasive and indivisible; that, to borrow James's (1909/ 1996) apt phrase, "the essence of life is its continuously changing character" (Chia, 2014, p. 253).

Third, the notion that change agents or leaders in powerful hierarchical positions are the ones responsible to bring about change is challenged. Aligned with the complexity approach, enabling and adaptive leaders can come from anywhere in the organisation (Uhl-Bien & Marion, 2009).

Fourth, viewing hierarchical leaders through only a positive lens, those who seek the good of the organisation, or who incite change for reasons of benefit to the organisation is challenged. Aligned with the critical discursive and practice based approaches, leader's motives, language, communication, positions adopted, espoused change beliefs should be critically assessed (McClellan, 2011). Change should be assessed from change leaders and recipient perspectives (Armenakis & Harris, 2009).

Fifth, aligned with the discursive and routines based approach, resistance is not conceived as actors who are trouble-makers and resist change (Ford et al., 2008). Unlike Ford (2008) who criticises demonising resistance and calls for celebrating resistance as a means of understanding change agents perspective, resistance is conceptualised as a phenomenon directed at actors rather than at the content of change, as highlighted by Jansson (2013). Resistance is seen as actors opposing those who are in power, who have decision making capabilities. Therefore unlike calls from some scholars (Oreg et al., 2011) to upfront prepare the organisation for greater readiness to change, in order to minimise resistance, resistance is conceptualised as a natural part of the process, directed at human actors.

Lastly, rather than focusing on dualities (planned versus emergent, episodic versus incremental, top down versus bottom up change) - a better understanding of how change is accomplished steers clear of such simplified categorisations. Attempts to taxonomise miss the flow of change, its indivisibility, and its continual natural nature. This is similar to Wood's (2005) observations of arresting leadership by labelling and categorising rather than experiencing the flow of leadership through its processes.

These fundamental underlying assumptions now enable laying down of a solid foundation for subsequent research.

2.10.3. Gaps

In line with the review objective of assessing how well research over the last 15 years has advanced the dual challenge, the literature was appraised. Six main themes are identified in the review. The strengths and weaknesses within the various perspectives have been analysed and a summary of these is presented in Table 2.6.

Table 2.6.   *Summary of strengths and challenges across themes*

6 Themes/Approaches	Summary of strengths of approach	Summary of weaknesses (problems, gaps & opportunities)
Change-through-storytelling and narratives	i. Stories and narratives magnify the micro-level detail over time ii. Stories and narratives challenge the underlying assumption of single accounts of truths or single realities iii. Stories aid in understanding processes of change (such as sensemaking) iv. Stories raise awareness of issues of power	i. Lack of utilisation of existing theory to explain observed phenomena ii. Greater adoption of strong process approach iii. Practical and actionable theory still missing iv. Leaders are sometimes portrayed as dominant actors who must manipulate and control recipients v. Underutilisation of real-time studies
Change-through-talk-in-interaction (discourses)	i. Drills down into in situ conversations. Talk becomes the point of focus and evidence is empirically "strong" ii. Role of language emphasised iii. Places meaning centrally on the agenda iv. Challenges a reconceptualisation of communication v. Raises importance of interactions vi. Increases awareness of skills required during dialogues vii. Attends to multiple levels thus providing insight into context viii. Highlights the role of agency and hegemony ix. Change is seen as socially constructed and ongoing – becoming is preferred over being	i. Practical insights still missing ii. Interactional skills required remain underspecified iii. Increase level of abstraction and theory-building iv. Strive towards greater meso-level theorising v. Conduct more "in-flight" real-time studies

	Strengths	Weaknesses
Change-through-schema alteration (shifts-in change beliefs)	i. Schemata provide an appropriate unit of observation to understand actors meaning construction ii. Attention is given to change specific schema iii. Focus on schema-change raises awareness of learning theories (such as double loop learning)	i. Significant shortage of empirical studies ii. Abstractness and related difficulty of "observing" mental models iii. Lack of utilisation of other social cognitive theories (such as cognitive dissonance theory)
Change-through-sensemaking and sensegiving	i. Sensemaking approach encourages a strong process ontology (treats micro-level processes seriously) ii. Sensemaking identifies initial conditions or key triggers such as cues and equivocality iii. Sensemaking perspective incorporates other approaches e.g. storytelling, discursive and cognitive based approaches	i. Insufficient attention on power dynamics during sensemaking and sensegiving ii. Inadequate attention is given to the skills and competencies required during sensemaking and sensegiving iii. Shortage of real-time, first-hand accounts iv. Insufficient attention given to informal conversations v. Failure to position sensemaking and sensegiving amongst other change processes vi. Insufficient utilisation of social cognitive theories (e.g. dissonance theory)
Change –through-routines (shifts-in-practices)	i. Challenges the illusion of control and predictability of outcomes ii. Emphasises praxis (thoughtful practical doing) and phronesis (practical wisdom) by actors involved iii. Rises above surface level data and abstracts processes of change iv. Links different levels of analysis v. Raises the importance of power, conflict and tension	i. Shortage of empirical papers ii. Prolonged engagement in the field iii. Under specification of practice related practical suggestions
Change-through-complexity (through-non-linear dynamics)	i. Draws attention to the processes of change and complex patterns ii. Promotes meso-level theorising iii. Complexity theory can be utilised in conjunction with phased approaches to change iv. Leadership is conceptualised as a relational process v. Complexity theory challenges notions of	i. Severe lack of empirical studies ii. Lack of real-time longitudinal studies iii. Greater adoption and integration of socio-psychology theory required iv. Insufficient attention to negative behaviours and issues of power

From the above review, research has over the last 15 years advanced a more detailed micro-level understanding of what goes on during change. The storytelling turn has surfaced micro-level detail and assimilates this detail through understanding the stories told. Actors tell stories from their perspective – simultaneous heroic and tragic tales (Brown & Humphreys, 2003). These stories are thus not single accounts of truth (Dawson & Buchanan, 2005).

Actors (including researchers) tell stories and narratives to influence what is going on (Buchanan & Dawson, 2007) and position what they want to see happen. Stories are often partial, ongoing, occur at multiple levels, compete, complement and redefine positions (Dawson et al., 2011). Stories are shaped depending on actors motives (Dawson & McLean, 2013). Competing stories are a natural part of the change process. Dominant stories can inhibit or promote change (Näslund & Pemer, 2012). The point is that stories can draw on strong beliefs and either promote or inhibit change.

The discursive turn embraces storytelling but emphasises discursive practices, for example, conversations (Tsoukas, 2005) which also reveals micro-level details. Change happens through talking-in-interaction (Preget, 2013). Changing patterns of talk, especially informal conversations can lead to new schemata (Balogun & Johnson, 2005). Talk and communication though is not just about sharing information (Johansson & Heide, 2008). Communication can be loaded with issues of power and hidden agendas. Voices can be silenced in the process (McClellan, 2011). Macro-level discourses have the potential to shape or inhibit micro-level discourses and vice versa (Jian, 2011; Nyberg & Mueller, 2009).

Part of talking is about making sense and giving sense to actors (van der Heijden, Cramer, & Driessen, 2012). These processes are triggered when there is equivocality (uncertainty, ambiguity) - where actors try to arrest multiple competing interpretations (Weick et al., 2005).

Surprises or shifts from the norm cause discomfort for actors and triggers the sensemaking and sensegiving processes (Griesbach & Grand, 2013). Sensemaking and sensegiving processes shape storytelling, talk and ongoing communication (Maitlis & Christianson, 2014). The cognitive turn reminds us and draws attention to the possibility that mental models (core beliefs, assumptions, desires, needs) influence talk and action (Kuhn & Corman, 2003). Shifting old mental models to new mental models is part of the dynamic process of change (Feldman, 2004). Such shifts can happen through informal talk or changing routines or trail-and error-learning (Balogun & Johnson, 2005; Rerup & Feldman, 2011).

The complexity turn illuminates the fundamental importance of human interaction and underlying dynamic processes of change (Marion & Uhl-Bien, 2001). Complexity promotes an understanding of the holistic system rather than studying parts of it (Schneider & Somers, 2006). Due to the dynamic nature of human interaction, outcomes cannot be predicted. Small changes can lead to massive consequences: initial conditions thus matter (Lichtenstein & Plowman, 2009). Actors bond, resonate and aggregate, as they engage to work out differences (Uhl-Bien & Marion, 2009).

Reflecting on Tsoukas and Chia (2002, p.568) concern that, "we simply do not know enough about how change is actually accomplished" and on how well the above contributions fare in terms of advancing the dual challenge - this review suggests that although research over the last 15 years has advanced understanding of micro-level detail, on reflection of the gaps that exist within and across the various approaches, not enough is yet known about how change happens or of the skills and behaviours that help provide practical insight into the code of change. The review suggests that better understanding of the dual challenge can be progressed further. Numerous gaps still remain. These gaps, drawn out in the above review, are summarised in Table 2.7 below.

Table 2.7.   *Summary of theoretical, methodological and empirical gaps identified*

Theoretical gaps	
	• **Theoretical Gap1: Dynamic process model of change** – Although linear, mechanistic, prescriptive models have been criticised for some time exposition of a dynamic process model remains underspecified (Nayak, 2008).
	• **Theoretical Gap2: Processes that bring about change** – Whereas complexity theory has advanced an understanding of change processes, none of the studies adequately unpack how change is accomplished by focusing on the processes that bring about change (even if it's for a particular case). There is limited tracking over time and from inside the change process explaining how and why change happens. This is in line with the observations by Sonenshein and Dholakia (2012) and Guiette and Vandenbempt (2013) who point out that the understanding of the processes that enable organisations to successfully change their strategies remains suboptimal.
	• **Theoretical Gap3: Linking micro-level mechanisms to macro level outcomes** - the link between micro-level and macro-level processes remain underspecified. Few studies adopt a meso-level approach (exceptions are Uhl-Bien and Marion (2009) and Lichtenstein and Plowman (2009)).
	• **Theoretical Gap4: Building theory -explaining why behaviours occur** – as highlighted by Houchin and MacLean (2005) research needs to utilise social psychology in order to explain behaviours. This remains a major gap. If research is to advance the dual challenge why change happens must also be addressed.
	• **Theoretical Gap5: Identification of the change skills required** – Preget (2013) draws on the importance of specific interactional skills. These change specific skills remain underspecified (Battilana et al., 2010) and are often assumed skillsets that hierarchical leaders already possess (Gilley et al., 2009). Most of the leadership studies that address the relationship between leadership and change do not account for the complexity of intra-organisational processes (Yukl, 1999), including the complexity of the organisational change process, which involves different activities (Marion & Uhl-Bien, 2001). That planned organisational change implementation involves different activities in which leadership competencies might play different roles has thus largely been ignored by the leadership literature (Higgs & Rowland, 2005, 2010; Uhl-Bien & Marion, 2009).
	• **Theoretical Gap6: Identification of negative behaviours** – as noted, many of the cases surfaced negative behaviour (Beech & Johnson, 2005; Dawson & McLean, 2013; Nyberg & Mueller, 2009) yet none of the studies incorporated these behaviours into understanding of change processes. There appears to be a bias towards understanding what are deemed positive behaviours (Marion & Uhl-Bien, 2001; Lichtenstein & Plowman, 2009).
	• **Theoretical Gap7: Actionable theory** – theory must provide practitioners with practical suggestions. A practical theory in service of action is still largely missing. Whereas complexity theory advances an understanding of some of the

	behaviours related to the change process, it is silent on some of the negative behaviours that play out. These behaviours should be better understood and how they impact the change process should be revealed. The review supports Johansson and Heide's (2008) observation that practical implications following research results need to be more elaborate.
Methodological gaps	• **Real-time longitudinal studies** - From the review, a major methodological gap remains approaching change from within the process itself. Not enough studies have "journeyed from inside the process" for an extended period of time. More real-time, longitudinal studies are required to experience the flow of change, with researchers as scholar-practitioners.
	• **Focus on both formal and informal meetings** - although supportive of Patriotta and Spedale (2011) and Jian (2011) that more attention should be given to formal meetings and how interactions are facilitated through meetings, a focus only on formal meetings is problematised. In order to progress knowledge of how change is accomplished, informal interactions must be captured. What happens "behind the scenes" such as that captured by Beech and Johnson (2005) must also be included.
	• **Underutilised analytic strategies**– some of the methods suggested by Langley (1999) should be pursued (e.g., synthetic strategy) in order advance theory. Methods such as those posited by Schneider and Somers (2006) where feedback loops can be better understood or explored should be considered. Methods such as that by Klarner and Raisch (2013) should be pursued.
	• **Change seen as collective of initiatives** - In line with Nielsen and Abildgaard (2013), there is a need for organisational interventions to be understood as a collective of initiatives and change activities, competing and intertwining with a multitude of concurrent events. Interesting future research could review how actors think, feel and act across change initiatives happening at the same time.
Empirical gaps	• **Large shortage of empirical studies** – The cognitive and complexity approach both highlight severe shortage of empirical studies. Whereas some empirical studies have been conducted (e.g.,Ford, 2010), they are not theory advancing. This serious empirical gap presents rich opportunity for subsequent research.
	• **Studies across different contexts** – More empirical studies across different organisational contexts should be pursued in jurisdictions that are broader than the United States and Europe in order to contrast and compare findings across different contexts.

2.11. Conclusion to the literature review

A comprehensive, systematic, state of the science literature review inspired by the dual challenge posited by Beer and Nohria (2000) and Tsoukas and Chia (2002) has been presented. The literature methodology and overview of the selected papers highlight the high quality and relevance of the reviewed papers, even though the selection comes with inherent limitations (i.e., a focus only on the subsequent papers that cite either of the two seminal papers). The systematic review though reveals six theoretical themes that present novel and sometimes overlapping perspective to how and why change happens.

The rigorous analysis also reveals the strengths to the approaches congruent with resolving the dual challenge. However, weaknesses within and across the approaches also reveals the enticing theoretical, methodological and empirical gaps that provide a fruitful area of work for subsequent research which can proceed to building theory and making inroads to the code of change. With a solid foundation in place, including a robust definition of change that aligns with a strong process ontology, as well as explicit underlying theoretical assumptions (often ignored or underspecified), a solid platform has been laid to progress ensuing empirical work.

Part II: Research Questions, Design and Methodology

Chapter 3 presents the study's overarching research question motivated from the useful foundations established in the systematic and detailed review of literature spanning the past 15 years .

Chapters 4 and 5 present the research design and methodology selected on the basis of the literature review and research question. Aligned with the design and methodology, the chosen methods for data collection and analysis are highlighted and selection justified. Ethical considerations during data collection and analysis are discussed. To ensure high quality research, sections on the design, methodology and methods also reflect how trustworthiness, credibility, dependability and confirmability (validity and reliability) of the research and its conclusions were addressed. Finally, limitations of the study design are presented.

3.   Research Questions

Following on from the in-depth literature review, a case has been made that a dynamic process theory of change needs to be advanced. It has been argued that such a theory could also pragmatically inform the code of change. Addressing both theory and practice together is imperative to make advances against the dual challenge.

Chapter 2 revealed and reconfirmed the need to address the knowledge gap: a deeper understanding and explanation of how and why change happens. A fine grained understanding of what happens on the ground (possibly through detailed narratives and *in situ* discourses), how plans and choices get translated into actions, how these get modified, adapted and changed (through sensemaking and sensegiving) must still be better understood. It was argued that the paucity of knowledge on how and why change happens through dynamic interactions over time needs to be remedied (Tsoukas & Chia, 2002; Yukl, 2008; Yukl & Mahsud, 2010). A case for a dynamic meso-level process model that accounts for the complexity of change, that includes the micro-level processes and their link to macro-level outcomes was motivated (Hunt et al.; 2009; Lichtenstein & Plowman, 2009; Marion & Uhl-Bien, 2001).

Given the knowledge gap, the initial research question is thus broad: **how and why does change happen?** The context is that of organisation change, at all levels of analysis and the aim is to gain an understanding of the ***processes*** of change, using discursive, complexity and social cognitive theory as guiding frameworks.

Starting off with broad questions but eventually addressing specific questions is not unfamiliar in qualitative research (the methodology section in Chapter 5 covers the choice of a qualitative approach). As noted by Corbin and Strauss (2008, p. 27), "The interesting aspect of qualitative research is that though a researcher begins a study with a general question, questions arise during the course of the research that are more specific and direct further data collection and analysis".

Further qualitative studies are usually more hypothesis generating rather than testing. Therefore it is necessary to frame the research question(s) in a manner that provides the investigator with sufficient flexibility and freedom to explore the topic in some depth (Corbin & Strauss, 2008). This approach thus provides for more specific sub-questions to arise and be addressed as the research unfolds.

The research question, and the ensuing design and methodology chapters build on the solid and useful foundations established by existing literature, while attempting to address the theoretical, methodological and empirical gaps identified in Chapter 2. The main research question and arising sub-questions are evaluated in the context of data analysis in Chapter 7.

Chapters 4 and 5 deal respectively with the research design and methodology.

4.   Research Design

4.1.   Introduction

Better stories **and** better constructs make good theory (Eisenhardt, 1991). In line with the overarching goal of developing "good" change theory, this Chapter examines an appropriate research design. Chapter 4 systematically examines the *nature of the research question*, the *research purpose*, the *research design and its logic* (including the choice of units of analysis) and the motivation for the *choice of the research design type*. The goal is to ensure a proper and fit design congruent with the research question posed.

4.2.   Nature of research question

As noted in Chapter 3, the initial research question is broad: *how and why does organisation change happen?* The research question is a "how" question rather than a "what" question. This type of research question requires a particular design type and methodology. It will be argued in the next sections that a longitudinal, real-time, case-based study with qualitative methodology for data collection and analysis would be appropriate to address a research question of this type. As noted, the methodology should also allow for new sub-questions to emerge and be addressed as the research unfolds.

"How" questions require narratives explaining an observed sequence of events in terms of a plot or an underlying generative mechanism that has the power to cause events to happen in the real world and the particular circumstances or contingencies that occur when these mechanisms operate (Van de Ven, 2007).

Next, the selected design of the study aligned with such a research question is motivated.

4.3.   Design Logic

Babbie and Mouton (2001) clarify that a sound and appropriate research design helps to answer properly phrased research questions in such a manner that the chances of reaching valid and truthful results are increased. Yin (2009) concurs that a research design is the logic (the "glue") that links the data to be collected (and the conclusions to be drawn) to the initial questions of the study.

A robust research design must address the following components: **units of analysis, purpose of the study, the logic of the research** and **the type of research design** (which should be appropriate for the research questions posed). These are covered in this Chapter. Once these design aspects have been addressed, the methodology and methods used (of data collection and analysis) can be addressed in Chapter 5.

4.4.   Units of analysis

The unit of analysis refers to the "what" of the study: what object, phenomenon, entity, process or event the research is interested in investigating. The unit of analysis is an important issue to be considered to find the right answers to the research question(s) posed.

Based on the research question, the unit of analysis identified for investigation is **organisation change** as a process over time. Given the complex and temporally extended nature of the unit of analysis, it will be represented by a single case in the empirical study. The particular case selected for study is an instance of change in a particular organisation setting over a specific time frame. The research purpose in relation to the unit of analysis (organisation change) is addressed next.

4.5.   Purpose of the study

Miles and Huberman (1994) and Babbie and Mouton (2001) identify three common research purposes: exploration, description and explanation. The purpose in the present study has to do with description and explanation. The purpose is thus theory building.

In order to address the main research question, the first purpose is to generate a detailed description of what happens within and between the phases of change. For this purpose, actors in the change process will serve as units of response, individually and collectively. The actual narrative of what the actors say and do will serve as primary data for analysis. The intent is to stay close to the data and to the surface of the words and events. The goal is to provide a comprehensive account of events in the everyday terms of those events, with interpretive inferences kept to a minimum (Sandelowski, 2000, 2010).

The main reason for use of such thick (Geertz, 1973, 2003) detailed description relates to the observation that not enough is yet known about how change actually happens. As previously noted by Tsoukas and Chia (2002), "only by placing ourselves at the centre of an unfolding phenomenon can we hope to know it from within". To know it from within means a richer understanding of actual

conversations, interactions, sensemaking, sensegiving, actions and choices, highlighted through the narrative.

The second purpose of the research is to move beyond the narrative description and provide an interpretation and explanation of how and why change happens. The goal is to build theory and move up the ladder of abstraction (Klag & Langley, 2013; Langley, 1999) by identifying the generative mechanisms causing events to happen (Van de Ven, 2007) and identifying the codes, categories, themes and constructs at play and the relationships among these (Eisenhardt, 1991; Eisenhardt & Graebner, 2007; Saldanha, 2009). Better stories are not enough to get to good theory. Better constructs are also required.

In summary, the two primary purposes of the research are to build theory on change by describing the events and telling the story (Dyer & Wilkins ,1991); Van de Ven, 2007) and identifying constructs and relationships among such constructs (Eisenhardt, 1991) to provide a theoretically rich interpretation and explanation of how and why change happens, in this way addressing the broad research question. As highlighted, this approach is congruent with the aphorism that *better stories* (that identify incidents and events) **and** *better constructs* (that identify codes and categories) make *good theory* (clear relationships between constructs) (Eisenhardt, 1991).

Lastly, the aim in theory building will not be limited merely to positing relationships among constructs or deriving a diagrammatic meso-level dynamic process model (Sutton & Straw, 1995). More importantly, theory building will aim at providing a rich explanation of ***why*** micro-level processes occur and ***how*** they lead to macro-level outcomes (House, et al., 1995; Weick, 2007; Whetten, 1989). To achieve this, both complexity theory as applied to organisations (Uhl-Bien & Marion, 2009) and dissonance theory at the level of individuals (Festinger, 1957) will serve as guiding conceptual frameworks. Other relevant theory, most notably Argyris' (2000) concept of theories-in-action will be invoked with a view to providing a dynamic, actionable meso-level process theory of change.

4.6. Logics of the research

Given the **research question**, the **units of analysis** and the **research purposes** of description, interpretation and explanation, the following four choices in terms of the logics of the research are made.

4.6.1. Variance versus process logic

As is the case in this research study, "how" questions require narratives explaining an observed sequence of events in terms of a plot or an underlying generative mechanism that has the power to cause events to happen in the real world and the particular circumstances or contingencies that occur when these mechanisms operate (Van de Ven, 2007, p. 145).

In this study a process rather than variance logic design is selected as appropriate (Van de Ven, 2007). However, as noted, processes can be viewed from different ontologies of the social world: one a world made of things in which processes represent change in things (grounded in a substantive metaphysics) and the other a world of processes, in which things are reifications of processes (Tsoukas & Chia, 2002), thus grounded in process metaphysics. Depending on the particular process ontology espoused: change may be modelled as motion and, thus, viewed as change in the qualities of substantive things over time, or as enacted through a matrix of interwoven processes. Research questions focusing on how the qualities of an entity (e.g., an individual, group, organisation, institution) change over time may be studied from the perspective of a substantive metaphysics in which processes represent changes in things. Other research questions that focus on how processes themselves (sensemaking, decision making, performing, identifying, etc.) emerge, develop, grow, and decline are compatible with a process metaphysics in which the focus is on how processes (rather than things) unfold over time (Langley et al., 2013, p. 6; Rasche & Chia, 2009).

In this study a process logic design aligned with a strong process metaphysics with a focus on how processes rather than things unfold over time is adopted. As an example: how common understanding and buy-in emerge and how these processes facilitate the emergence of a disequilibrium phase will be addressed, rather than how an individual or coalition (entities) changes over time. The process logic model and process ontology of change are well aligned with the main research question: *how and why does organisation change happen*?

4.6.2. Generalisation versus contextualisation logic

Secondly, to understand change in depth, the design needs to be aligned with the logic of contextualisation (i.e., to explore the phenomenon in detail and understand the context within which change happens). Context then is not a background variable but matters in terms of developing a deeper understanding of how and why change happens. The surrounding "ecology" or "environment", with its notions of multiple, interacting systems, helps contextualise the contexts in which the case under investigation (instance of change) is embedded (Babbie & Mouton, 2001). As noted, context in this research is thus understood to be the structural conditions that shape the nature of situations, circumstances, or problems to which individuals respond by means of action/interaction/emotions (Corbin & Strauss, 2008).

As opposed to the idiosyncratic nature of contextualisation, the logic of generalisation deals with the problem of knowing whether a study's findings are generalisable beyond the immediate study. It focuses on external validity (transferability). Yin (2009) notes that critics often challenge designs that trade off generalisation for contextualisation, where typically fewer cases (low N) are involved, claiming that generalisation is compromised. Yin (2009) argues that such critics incorrectly evaluate case designs against design criteria for survey research, in which random sampling is used to permit generalisation to the population of units of analysis. Survey research aims at maximising external validity and statistical generalisation, whereas case designs privilege internal validity and analytic or theoretical generalisation (Babbie & Mouton 2001, 2003).

Generalisation, even for single case studies is possible but not automatic. Generalisations are based on evidence provided by the data. Findings are tested for their fit with previous knowledge, including direct experience with similar cases, as well as previous research and theory. The generalisability of case study findings is demonstrated through showing the linkages between findings and previous knowledge.

This is also referred to as theoretical triangulation (Babbie & Mouton 2001; Eisenhardt & Graebner, 2007; Gibbert & Ruigrok, 2010). Theory is not only helpful in designing a case study but also becomes the vehicle for generalising case study results (Yin, 2012). The purpose of the present research is to develop theory, not to test it, hence statistical generalisation is not at issue and theoretical sampling rather than random sampling is appropriate. Theoretical sampling simply means that case selection is based on suitability for illuminating and extending relationships and logic among constructs.

As well argued by Eisenhardt and Graebner (2007), much as laboratory experiments do not rely on random sampling from a population, but rather cases are selected for inclusion based on the likelihood that they will offer theoretical insight, so too in case designs, cases are sampled for theoretical reasons, such as revelation of an unusual phenomenon, replication of findings from other cases, contrary replication, elimination of alternative explanations, and elaboration of the emergent theory.

In summary, the research design for the present study aligns with the logic of contextualisation rather than the logic of statistical generalisation. In terms of the process logic design selected for this study, generality depends on versatility to enable analytic generalisation, rather than uniformity across contexts to achieve external generalisation, as in the case of variance logic studies (Van de Ven, 2007; Yin, 2009).

4.6.3. Validation versus discovery logic

Thirdly, the study's design logic, aligns with the logic of discovery. The objective is to maximise the likelihood of being able to discover from the data incidents and events, the theoretically relevant constructs and their relationships, as well as the narrative themes that help explain the events and processes that underlie change (Babbie & Mouton, 2001; Corbin & Strauss, 2008; Van de Ven, 2007).

4.6.4. Synchronic versus diachronic logic

Finally, rather than a synchronic (cross-sectional) design, a diachronic (longitudinal) design is selected. Process studies necessarily entail collecting longitudinal data (Babbie & Mouton; 2001; Van de Ven, 2007).

Rather than relying on archival data to obtain a retrospective account of the change processes under study, the choice is made to use real-time observations of the change process as it unfolds (Van de Ven, 2007). This is also important in addressing the paucity of real-time studies found across five of the themes in Chapter 2. Process studies take time seriously, illuminate the role of tensions and contradictions in driving patterns of change and show how interactions across levels contribute to change. They may also reveal the dynamic activity underlying the maintenance and reproduction of stability (Langley et al., 2013).

Thus diachronic logic is deemed appropriate for the present research. An understanding of the time-ordering of events is critical to answering the research question.

4.7.   Choice of research design type

Based on the research question and the four logics chosen for the research design (process rather than variance logic, logic of contextualisation rather than logic of statistical generalisation, logic of discovery rather than logic of validation and diachronic (longitudinal) logic rather than synchronic) the research design type considered most appropriate is that of an empirical, single-case, real-time, longitudinal study (Yin, 2009).

The single case study design was seen to be the most appropriate design type to describe in- depth (using thick description - Geertz, 1973; 2003) and within context the events and related narrative, as well as to build theory. Such research, that builds theory from cases is often regarded as the "most interesting" research (Bartunek, Rynes, & Ireland, 2006) as it promotes the logic of discovery (Weick, 2007).

Yin (2009) provides a definition of case studies which supports the appropriateness of the single case study design. A case study is an empirical enquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident.

Thus in order to know the phenomenon (change) from within and understand in-depth what goes on within and between the phases of change (Tsoukas &Chia, 2002) and in order to progress a dynamic complex understanding (Uhl-Bien & Marion, 2009) of change across multiple levels of analysis (House et al., 1995) and to produce an actionable non-linear theory of change (Argyris, 2000; Kerber & Buono, 2005), a single case study design is selected.

Further, the single case for intensive study was purposively selected as it represents an extreme, revelatory and longitudinal case unfolding in real-time (Yin, 2009).

4.8.   Selection of the case

The single case selected for study is an instance of change within an industry-level organisation. The case was selected as a result of the specific context and potential to unfold the detailed processes involved during the drama of change.

The instance of change takes place mainly across a three year period: 2011-2013. The industry-level organisation forms an ideal setting to unpack what goes on in detail, as the actors are competitors that need to come together to deliver services within the South African financial services industry. The actors are naturally conflicted in that they come with their own organisation's interest in mind, yet have to work together to create and deliver joint services at industry level.

The actors are therefore **interdependent** (they cannot produce services without each other), **heterogeneous** (have varying ideas, needs, beliefs, assumptions and values), **interact dynamically** (they have to engage in order to define services and by engaging they can influence each other and change each other's perspectives) and due to this there is **adaptive tension** (competing interests and needs that create the capacity for emergence of new structures and services). These conditions describe the necessary conditions for a complex adaptive system and present the ideal environment for understanding how and why change happens (Hazy, Goldstein, & Lichtenstein, 2007; Marion & Uhl-Bien, 2001).

The case (instance of change over time) entails actors within the financial industry having to reconsider current services as a result of perceived problems with these services. The case provides a deep and detailed understanding of how these actors come together, form coalitions, influence others to consider the perceived problems, debate conflicting perceptions, work though heightened tension and conflict and eventually through continued debate and engagement over 3 years experience the emergence of a new service and structures generally supported by all participants.

The above brief context aligns well when considering why and when case studies are appropriate. Yin (2009) identifies numerous rationales for single case studies. The case selected for the present study is representative of an *extreme* case. The case "fits" the conditions of a CAS very well. As noted, competitors with diverse perspectives, varying mental models, competing interests, beliefs and needs, highly interdependent on each other are required to come together and jointly produce services. Repeated interactions to debate conflicting preferences and constraints are a normal part of the change process. There is thus high complexity (Schneider & Somers, 2006; Uhl-Bien & Marion, 2009).

It is also a *revelatory* case in that the case presents the opportunity for the researcher to observe first hand and analyse change within an industry organisation that impacts the majority of participants and associations across the financial industry.

This situation and circumstance is usually inaccessible to social science enquiry. Lastly the case also aligns with the rationale of a *longitudinal case*: studying the same case at different points in time (in this case in real-time).

Finally, the researcher was an insider (a scholar-practitioner – a term coined by Chris Argyris) and "close to the action". The researcher had access to formal and informal conversations with various actors and thus could capture and reflect on what was going on in the spaces between (Lichtenstein & Plowman, 2009).

In summary, the single case was purposefully selected, and intentionally aligned with a design to build a dynamic meso-level process theory of change.

4.9.   Priority ordering of validity types

A further motivation for a single case study based on the design of a real-time, longitudinal study aimed at building a dynamic meso-level process theory is to purposively prioritise internal validity, construct validity and reliability over external validity. Case study researchers should not "do last things first" (Gibbert & Ruigrok, 2010).

Case study authors' preoccupation with external validity may be understandable, given pressures that require them to acknowledge the limitations involved in "learning from samples of one or fewer" (March, Sproull & Tamuz, 1991), and the heavy emphasis put on external validity in Eisenhardt's (1989) highly influential paper. However Gibbert and Ruigrok (2010) suggest that too many researchers have sacrificed other types of validity for the sake of external validity. As Cook and Campbell (1979) as well as Silverman (2006) suggest, "that may be too high a price to pay".

As such, there are sound theoretical arguments suggesting that case study authors wishing to address rigor extensively should prioritise internal and construct validity over external validity.

Papers that address rigor extensively do not simply "tick off" validity and reliability criteria individually, but instead consider their hierarchical relationship (Cook & Campbell, 1979). The choice to prioritise construct validity, internal validity and reliability influenced the selection of the design type and the data collection and analysis procedures. Further, the following summarised tactics (Table 4.1.) were utilised to strengthen construct validity, internal validity and reliability (Gibbert & Ruigrok, 2010; Van de Ven, 2007; Yin, 2009).

Table 4.1.   *Tactics Improving Quality of Case Studies*

Construct validity (trustworthiness and confirmability)	
Data Collection	
	• Triangulation - use multiple sources of evidence • Have main actors review draft case study report (2 main actors) • Write extensive field notes • Member checks • Audit trail • Prolonged engagement • Persistent observation • Referential adequacy (e.g. audio) • Identify incidents and events • Specifying an incident (review by key actors) • Measuring an incident • Establish chain of evidence

Internal validity (credibility)	
Data Analysis	
General Strategies	• Clear research framework (conceptual theoretical framework guided the coding process) • Developing a case description (story narrative) • Examining rival explanations • Theory triangulation

Analytic techniques	• **During coding**
	
	    o Pattern matching / constant comparative method (Dougherty, 2002)
	
	    o Explanation building (via memos)
	
	• **During narrative description**
	
	    o Visual mapping (events over time)
	
	    o Temporal bracketing
	
	    o Sequence in time

	o Focal actor of actors
	o Identifiable narrative voice
	o Canonical or evaluative frame of reference
	o Other indicators of content or context
	• **During formal analysis (theory building)**
	o Visual mapping strategy using logic models (causal loop diagramming)
	o Explanation building (via memos and codeweaving)

Reliability (Dependability)	
Data Collection	• Develop and maintain a case study database

Note. Tactics synthesised from Babbie and Mouton (2001); Gibbert and Ruigrok (2010); Van de Ven (2007); and Yin (2009)

4.10. Practical considerations

Aside from the design considerations provided above the researcher had to carefully consider practicalities in motivating a single case study. Three practical reasons are provided further motivating why a single case study is the right research design choice.

- **Solo researcher** – the researcher was a lone scholar-practitioner through the process. Single case studies are well within the capabilities of solo investigators - compared to multiple case studies that can call for multi-investigator teams (Yin, 2012).
- **Extended time in field** – one main criticism and risk faced by case study researchers is the amount of extended time required in the field, requiring persistent observation and heightened awareness especially for real-time, longitudinal studies. Incidents happen "on the fly" and the researcher had to continuously sense opportunities for data collection on an on-going, tireless and consistent basis (Babbie & Mouton, 2003).
- **Effort required (transcribing, coding, memoing)** – the single case amounted to 374 primary documents and more than 3500 pages of data over a period of 3 years. Aside from capturing data (mostly through audio recordings), the researcher had to personally transcribe the data (most often the length of recordings was an hour and a half long; therefore not short), then make time for coding and reflect on the codes and how they relate to research questions and theory. All of this took time and effort.

4.11. Conclusion regarding the research design

After a careful consideration of the research questions, the purpose, the choice in design, the objective of building theory, across multiple levels of analysis, the plan for this study is to pursue a single case study design, with an emphasis on internal validity. As noted, analytical generalisation is still possible and demonstrated through linkages between the findings and previous theory, utilising abduction as the logic mode of inquiry (Van de Ven, 2007). The single case is further motivated as it is an exemplar *extreme, revelatory* and *longitudinal case* (Yin, 2009, 2012).

Lastly, aside from meeting the research purposes of *description, interpretation* and *explanation*, the single case research design makes a modest contribution to the development of theory, methodology and practice (presented in Chapter 8 and 9). The single case is thus motivated as the appropriate research design type.

Chapter 5 deals with the research methodology selected based on the above described design.

5. Research Methodology

5.1. Introduction

Having carefully motivated the design choices, this Chapter outlines and justifies the methodological choices made to enable achievement of the research purpose. Research methodology focuses on the empirical research process and the kind of tools and most "objective" (unbiased) procedures to be used (Babbie & Mouton, 2001).

Consideration is given in the following sections to the methodological paradigm or approach adopted, the data collection procedures and the relevant ethical considerations. Thereafter, a detailed step by step account is presented of the dynamic and emergent analytical procedures followed to ensure rigor. Lastly, the limitations inherent in the design and methods used are discussed.

5.2. Rationale for choice of qualitative approach

For the reasons set out below, a qualitative methodological approach was adopted for this study. This approach is justified as the research interest is to gain through discovery an in-depth, detailed, creative understanding of how and why change happens (Weick, 2007).

Constructivism or qualitative research emerged as an alternative to the positivist form of enquiry as researchers sought to examine the context and "insider view" of human experience. Constructivism assumes that there are multiple subjective realities and different interpretations may result from any research endeavour. The interpretations are shaped by particular circumstances that exist as the study unfolds in real time. Researchers who work within the constructivist paradigm seek to illuminate the subjective reality of others through the process of detailed descriptions of their experiences. In this paradigm the researcher is subjectively immersed with the focus directed at deeper understanding of what is happening in the experience of individuals or groups, based on a limited and manageable number of cases (Doyle, Brady, & Byrne, 2009).

The qualitative approach distinguishes itself from the quantitative paradigm in terms of the following main features: research is conducted in the natural setting with a focus on process rather than outcome. The actor's perspective (the "insider" or "emic" view) is emphasised (Ponterotto,

2005). The primary aim is in-depth (thick) descriptions with a view to understanding of actions, interactions and events.

The main concern is to understand social action in terms of its specific context (idiographic motive) rather than to generalise to some hypothetical population. The logic of the research process is often inductive and/or abductive (Van de Ven, 2007), resulting in the generation of new hypotheses and theories. The qualitative researcher is seen as the "main instrument" in the research process (Babbie & Mouton, 2001; Corbin & Strauss, 2008).

All of the above provided an approach consistent with the research question and design logic described in Chapters 3 and 4. To build a dynamic process model of change, through discovery, over a long period of time, whilst gathering data from an emic perspective, within the contextual influence of an industry level organisation, a qualitative approach was considered most appropriate (Gray, Stensaker, & Jansen, 2012).

5.3. Data Collection

For purposes of the qualitative case study approach, Yin (2009) identifies six sources of case study evidence. These are documents, archival records, interviews, simple/direct observation, participant observation and physical artefacts.

The qualitative data collection methods used in the present study included participant observation (where the researcher is simultaneously a member of the group and a researcher doing the study), use of personal documents (e.g., letters, papers, emails) and documents**,** for example field notes and analytic memos kept by the researcher (Babbie & Mouton, 2001).

Data were collected in real time over a 3 year period, between 2011 and 2013. The researcher recorded actual discussions and dialogues (using LiveScribe Smartpen technology) and then transcribed this using Dragon Naturally Speaking software. The discussions were a mixture of both formal and informal interactions. The researcher had direct access and insight into discussions with the main actors during the change processes.

The transcripts from the interactions were rechecked for accuracy by an independent outsider. Many interactions ranged from an hour to six hours. The majority of these were recorded mainly in audio and are available on CD. Where the recording device failed (on 2 occasions), field notes were

compiled during the same evening. A total of 374 primary documents, comprising more than 3 500 pages of data were recorded.

In addition to the above, three overriding principles important to any data collection effort in case studies were adhered to, namely use of *triangulation*, establishment of a case study database and *maintaining a chain of evidence* (Gibbert & Ruigrok, 2010; Yin, 2009).

First, to illustrate the use of triangulation, the aim of which is to collect information about different events from different points of view (Babbie & Mouton, 2001), the following excerpts from the data are provided. The first is a written response from a participant. The second relates to field notes from a dialogue between actors reviewing the responses and the third is reflection in an analytic memo by the researcher. The multiple sources of evidence converging on the facts and findings provide different points of view on reality and evidence of data triangulation.

Written participant response:

> *When the document was first released the constituencies were generally surprised and had very little information on the reasons for such a paper or who was behind it. I received calls from a number of people trying to get facts, unfortunately I was equally uninformed. People were concerned about the potential impact and wanted to know who was behind this and who lobbied with RegCo to have this reviewed. (21:21, 536-536)*

> *The manner in which the document presents the issues creates the impression it was compiled in a hurry, for example it contains factual errors […] that could easily have been verified, and some inaccuracies regarding Service A and its history. Statements were presented as arguments for the philosophies, yet they were not solid enough to support the conclusions that were derived at. (21:95, 537-538)*

Field notes:

> Des and Joe consolidated responses and met to discuss their perspectives and interpretation of the responses and the way forward. The researcher's field notes of this interaction indicate how Des and Joe assessed the responses.

>> *[Both Joe and Des noted that a particular ThinkCo member's response was disappointing. They were taken aback by the challenging tone of the note, especially around the questioning of who was on the Steerco and in the workgroup. They also found it quite strange that the purpose of the document which was to try and understand where different stakeholder's philosophies were; was not understood. The statements that the document was rushed and not properly thought through was also not correct and they felt [these] were irrelevant comments. Joe expressed that he was tempted to give the actor a call to chat through his responses to indicate how unimpressed RegCo were with the response. Des also noted his disappointment.*

> *The level of thinking was certainly not from an industry perspective and seemed to be a very protectionist ThinkCo member specific position]. (34:4, 5-5)*

Analytic memo:

Des was comfortable with how the discussion had panned out. His sense of the meeting was that they were on the same page.

> *[They were not overawed by the feedback. It had taken them a while to work through the responses and to get to grasp with where different people were in the responses. In the final analysis they believed that the principle-based position or risk-based position, as Joe called it, was still the right approach to be adopted by the Steerco. They both felt that the industry had become accustomed to Service A, without seeing the bigger picture and without seeing the unlevel playing fields that was created]. (34:27, 13-14)*

Triangulation of the data on these lines was considered the best way to elicit the various and divergent constructions of reality that exist within the context of the study. The above excerpts illustrate the collection of evidence to represent different points of view. No one perspective (story) was considered the "one true story". Mutiple "voices" were desired and sought.

Second, given the sheer volume of data collected in real-time, one of the difficulties the researcher faced was to maintain data collected in a systematic, orderly and easily retrievable manner. The researcher utilised a case study database for storage and management of data from the single case under investigation. The case study database represents a formal assembly of evidence distinct from the case study report (Gibbert & Ruigrok, 2010; Miles & Huberman, 1994; Yin, 2009). The case study database contains all the evidence collected (available on CD) and also has a case study database record (a matrix categorising all data collected and listed in chronological order) for ease of reference. Analytic memos compiled are also contained in the case study database. The full case study database record is captured in the Appendix A. The following 3 documents (out of 374) for the case under investigation are listed, as examples of all recorded artefacts in the case study database.

Table 5.1.   *Examples of Records in Case Study Database*

Artefact Unique Reference	Month	Data Collected (Format - field notes, emails, presentations, videos, audio, photos, etc.)	Configuration (Name of file in Atlas.ti)	Transcribed or in Word (Y/N)	Comment
0018	June 2011	Doc	C1_0018_2011JUN_ INDUSTRY INTERACTION_INDUSTRY RESPONSE_FEEDBACK ON PHILOSOPHIES	Y	ThinkCo member responses on philosophies
0212	Feb 2013	Email	C1_0212_2013FEB_WORKING GROUP INTERACTION _EMAIL_ JIS_MS	Y	Clarity on servicing hierarchy
0281	June 2013	Doc	C1_0281_2013JUN_STEERING COMMITTEE INTERACTION _MINUTES	Y	06 June recording of meeting

Lastly, a *chain of evidence* was maintained in order to allow the reader to reconstruct how the researcher went from the initial research question, to refined sub-questions to final conclusions (Gibbert, Ruigrok & Wicki, 2008; Yin, 2009). This chain of evidence is illustrated and presented in Chapters 6 and 7. There are explicit links among the questions asked, the data collected and the conclusions drawn. All the data were loaded into a CAQDAS program (Atlas.ti) and the references for any excerpt can be traced.

As an example the following excerpt illustrates that the evidence can be traced back to primary document 149, paragraph 225 and lines 44-50 in Atlas.ti. These can further be traced to actual recordings, written responses (reports or emails) or field notes and analytic memos all available in the case study database for scrutiny.

> *Joe: okay, let's just look at it from the other side. […] Now how are we going to back that one? (149:225, 44-50)*

All of the above enhance construct validity and reliability.

In summary, the two ways to improve the trustworthiness and confirmability (Babbie & Mouton, 2001) of the data collected were to triangulate the data, that is, adopt different angles from which to look at the same phenomenon, by using different data collection strategies and different data sources (Denzin & Lincoln, 1994; Yin, 1994, 2009) and to maintain a chain of evidence.

To improve reliability (dependability), the case study database was constructed and utilised (Gibbert et al., 2008). "Reliability" refers to the absence of random error, ostensibly to enable subsequent researchers to arrive at the same insights if they were to conduct the study along the same steps again (Denzin & Lincoln, 1994). Similarly, Silverman defines reliability as "the degree of consistency

with which instances are assigned to the same category by different observers or on different occasions" (Silverman, 2005, p.210). Silverman points out that in many qualitative studies, "the reader has to depend on the researcher's depiction of what was going on" (Silverman, 2005, p.221). Silverman suggests that reliability can be ensured by a principle he calls "low inference descriptors". The audio recording of discussions and careful transcriptions used in the present study were considered to aid in improving reliability.

A case study protocol to serve as guide when conducting interviews (to enhance reliability) was not considered appropriate for this study as the data were collected in a naturalistic setting, in real-time and were based on actual conversations among the actors or written documents generated independently of the research (Gibbert et al., 2008; Miles & Huberman, 1994).

5.4. Ethical considerations

A critical question arising from the above outline of the data collection methods is how the actors and organisations involved were protected. The industry organisation that served as context for the study provided written permission from the Board to enable access to data collected. The CEO was also provided a delegated authority to decide on practical access to information. Access to any information relating to the study was granted including written documents, email correspondence, minutes from meetings and recordings from meetings.

The researcher took extra care to ensure that all actors were protected by maintaining their anonymity. Each document was edited and anonymity maintained by using pseudonyms for actors and their respective organisations. Any detail which might enable actors or their organisations to be identified was removed. Even though broad permission was granted, the researcher reminded actors on an on-going basis that audio recordings were in progress.

Lastly, the narrative and formal analysis of the data were presented to two key participants to ascertain if there was any "sensitivity" contained in the analysis. Through these actions, actors and their organisations were protected and potential harm minimised (Babbie & Mouton, 2003).

The next section sets out how the data were analysed.

5.5. Data Analysis

There are constant calls in the scholarly literature for more in-depth process research that will enable us to understand organisational phenomena at more than a superficial level (Crevani, Lindgren, & Packendorff, 2010; Pettigrew et al., 2001; Tsoukas & Chia, 2002). When researchers actually go out and get the data required to achieve this, they find that the deep understanding they sought does not magically leap out. Process data are notoriously challenging and require disciplined reflexivity and alertness (Langley, 1999; Weick, 1999, 2007).

This section describes how the data were analysed. The in-depth "raw" data were used to conduct extensive analysis which helped develop the narrative and dynamic process model. As noted, in line with Gibbert et al. (2008), external validity was purposefully traded off giving preference to internal validity, construct validity and reliability.

Rather than a cursory reference to methods such as grounded theory (Glaser & Strauss, 1967), a step by step guide to how the analysis was conducted is provided. The analysis described below thus "talks the walk" describing in detail exactly how the analysis was conducted. The aim in doing so is to enhance trustworthiness, credibility and confirmability, including both reliability and validity (Gibbert & Ruigrok, 2010).

Lastly, the mode of logic used in the inquiry was that of abduction. Whilst **induction** refers to inference drawn from direct observation of a phenomenon that results in assigning a probability of the likelihood of an occurrence in future or general, **abduction** refers to a conjecture or hypothesis that researchers invent to explain anomalies or surprising patterns observed. This conjecture goes beyond the information given in a specific case (Van de Ven, 2007, p. 207). The methods of analysis described below are in line with an abductive mode of inquiry.

5.6. Provisional coding list

The researcher started the analytical process by first defining a set of preliminary, or provisional codes (Saldanha, 2009). Many social phenomenologists consider social processes to be too complex, too relative, too elusive or too exotic to be approached with explicit conceptual frames. They prefer a more loosely structured, emergent, inductively "grounded" approach to gathering and analysing data:

Such researchers suggest that the conceptual framework should emerge from the data; the important research questions will become clear only gradually and meaningful actors and settings cannot be selected prior to fieldwork (Miles & Huberman, 1994). Miles and Huberman (1994) though argue in line with Wolcott (1982, p.157) that it is "impossible to embark upon research without some idea of what one is looking for and foolish not to make that quest explicit".

Siggelkow (2007) makes a similar observation to Miles and Huberman (1994), stating:

> An open mind is good; an empty mind is not. It is true that one wants to retain the capacity to be surprised, but it seems useful (and inevitable) that our observations be guided and influenced by some initial hunches and frames of reference. (p. 21)

From the review of the literature, a preliminary list of 85 initial codes drawn from the theory was constructed. This provisional list of codes is provided in Appendix B. A code in qualitative inquiry is most often a word or phrase that symbolically assigns a summative, salient, essence capturing and/or evocative attribute for a portion of language based or visual data (Saldanha, 2009).

The levels of analysis spanned by the codes ranged from individual level to system level. Three examples are provided below. Each code was listed in Atlas.ti with a unique colour for easy recognition during analysis.

Table 5.2.   *Example of preliminary codes*

Code No	Code description	Definition	Source
12.	Interdependence	The productive well-being of one agent or aggregate is dependent on the productive well-being of others.	Uhl-Bien et al. (2007)
47.	Disequilibrium state	A notable movement away from stability and which sparks emergent change processes.	Lichtenstein and Plowman (2009)
77.	Dissonance (inconsistency)	Existence of non-fitting relations among cognitions. Two elements are in a dissonant relation if, considering these two alone, the obverse (opposite or reverse) of one element would follow from the other. x and y are dissonant if not x follows from y.	Festinger (1957)

5.7.   1st cycle coding

As the data collected were transcribed and chronologically ordered into the case study database, the researcher began 1st cycle coding. First cycle coding methods are those processes that happen during the initial coding of data (Saldanha, 2009). Coding was done using Atlas.ti. Saldanha (2009) organises first cycle coding methods into 7 broad sub-categories and identified 22 different 1st cycle coding methods within these 7 sub-categories. Several of the individual methods overlap slightly and can be compatibly "mixed and matched" for application in one particular study (Saldanha, 2009, p. 51).

A list of 1st cycle coding methods used during the first pass of the data is listed below in Table 5.3. Specific coding method decisions were made before, during and after the initial review of the data corpus. Five 1st cycle coding methods were adopted.

Table 5.3.   *1st Cycle Coding Methods Used*

Sub-category	Coding method	Description
Grammatical	Simultaneous coding	Application of 2 or more different codes to a single qualitative datum. Appropriate when data's content suggests multiple meanings that necessitate and justify more than one code.
Elemental	In vivo	Code refers to a word or short phrase from actual language found in data. Honour participant's voice.
	Initial/Open coding	Breaks down qualitative data into discrete parts, closely examining them and comparing them for similarities and differences. Goal is to remain open to all possible theoretical directions indicated by reading of data. Opportunity to reflect deeply on the content and nuances of data.
Exploratory	Provisional	Begins with a "start list" of researcher generated codes based on what the preparatory investigation suggests might appear in the data before they are analysed Provisional list generated from such preparatory investigative matters as: literature reviews, studies conceptual frameworks, researcher hypotheses or hunches. As data is collected coded and analysed, provisional codes can be revised, modified, deleted or expanded to include new codes.
	Holistic	Applies a single code to each large unit of data in the corpus to capture a sense of the overall contents and possible categories that may develop. Researcher already has a general idea of what to investigate in the data or to chunk the text into broad topic areas, as a first step to seeing what is there. Preparatory approach to a unit of data before a more detailed coding or categorisation process through 1st or 2nd cycle methods. A "middle order" approach, somewhere between holistic and line by line is also possible as holistic coding method.

Note. Adapted from "*The Coding Manual for Qualitative Researchers*," by J. Saldanha, 2009, London: Sage Publications.

Due to the extensive data collected in real-time, one of the methods used was the holistic coding method. This method applies a single code to each large unit of data in the corpus to capture a sense of the overall contents and possible categories that may develop. It is an attempt to grasp the basic themes or issues in the data by absorbing them as a whole [the coder as *lumper*] rather than by analysing them line by line [coder as *splitter*] (Saldanha, 2009). Each qualitative datum, loaded as primary documents into Atlas.ti were reviewed to grasp what was going on.

Although holistic coding and the provisional list of codes assisted the researcher in getting a sense of what was going on, the researcher realised that the initial code list was insufficient. The provisional list of codes did not capture the essence of what was going on in the data and the researcher suspected that some provisional codes were actually categories (e.g., social skill). To stay close and true to the data, in vivo codes (created from the actual words of participants) and open coding methods were also used. These methods were used to code at a more granular level. The aim was to understand the beliefs, behaviours, actions and interactions of the actors during the process at the micro-level and ensure that the researcher stayed as close to the words and expressions of the participants and as close to the surface data as possible. As an example of in vivo coding, instead of coding an excerpt as, say, a skills gap, the researcher coded excerpts in the words of participants as "*very few conceptual thinkers*". New emergent codes were therefore created as the coding process continued. A total of 353 codes were created for the case.

As the data were reviewed using the five methods above, the researcher was anxious to understand how (and if) the codes and categories linked together. Each document was coded in chronological order and the researcher continued in parallel to draft analytic memos as encouraged by numerous scholars (e.g., Corbin & Strauss, 2008; Saldanha, 2009).

Analytic memos are somewhat comparable to researcher journal entries or blogs - a place to "dump your brain" about the participants, phenomenon, or process under investigation by thinking and thus writing and thus thinking even more about them (Saldanha, 2009). "Memos are sites of conversation with ourselves about our data" (Clarke, 2005, p. 202).

5.8. Memoing

For a large part of the 1st cycle coding the researcher was unsure how the initial coding would assist in addressing the main research question and more specifically how to identify themes and links between these.

As strongly recommended by Miles and Huberman (1994), Corbin and Strauss (2008) and Saldanha (2009) continued memoing occurred throughout the analytic process. Aside from a place to reflect on the study, analytic memo writing was important as it served as an additional code and category generating method.

Further, the cyclical collection, coding and analytic memo writing of data – a process generally termed "theoretical sampling" - are not distinct linear processes but "should blur and intertwine continually, from the beginning of an investigation to its end" (Glaser & Strauss, 1967, p. 43). The first memo written captures the researcher's thoughts before starting the coding process.

[I am about to start coding. I've created a code book using the conceptual framework from the literature. I have in excess of 70 codes taken from the theory. Before starting to code, I wanted to think through clearly and holistically what was going on [with the case]. Some of the theory in the background has been playing on my mind as I think through starting the coding process.

One of the things that I want to do is colour code - that is to assign specific colours to the different codes that I have created in the code book. The reason for this is quite simple. It will help me understand better what is going on in terms of the different codes and how they potentially relate in terms of the process. I must admit I'm probably stalling as I am a perfectionist and want to make sure that the coding that I start with is done correctly. Kerrin has been guiding that coding is a dynamic process. There is no perfect way of coding and I have to keep this at the back of my mind. I have to start coding even though I feel anxious about it. I think the anxiety stems from wanting to get this right the first time around which is a bit silly as I know that this is an iterative process. I have these concepts from the theory playing in my mind and I immediately want to draw the dynamic process in my mind as I go along.
What I have to be careful about is researcher bias. I'm conscious that if I go looking for something in all likelihood I will find it. This is the caution Saldana raises and the benefit of coding, for example using open or initial coding or even holistic coding is that it should force me to review the data from a fresh perspective and to ensure that whatever the data may be pointing to - that I am open to analysing this. Strangely, having said this I think I feel a bit more relaxed in terms of using the colour-coded scheme from the code book but at the same time in being open to looking at the data from a critical perspective and asking myself what is this piece of datum or what is this data corpus actually about. I guess this is what Van de Ven means when he says the researcher has to be reflective, and seek for alternative plausible explanations. (301:1, 3-5)].

Analytic memos then served as a means to reflect on what was going on during the coding process and created the space for the researcher to reflect on codes, categories and the possible relationships/linkages between these.

5.9.   Incidents and events

After completing intensive first cycle coding and reflecting on the analytic memos, the researcher was still unsure how to link the emerging codes and categories in a meaningful manner. As the data and memos were reviewed repeatedly, themes such as "birds of a feather flock together" or "setting the cat amongst the pigeons" emerged. Further reading of for example, Langley (1999), Van de Ven (2007) and Langley et al. (2013), helped the researcher conclude that the best way to understand what was going in the case and through the change process was to reflect on the incidents and events through the compilation of a narrative.

Incidents are operational empirical observations, while events are abstract concepts of bracketed or coded sets of incidents. The stream of incidents, a directly observable first-order set of activities, is translated into a sequence of events, a more abstract second-order construction (Van de Ven, 2007). As noted, data were collected in real-time. Identifying incidents was thus an on-going real-time procedure. The researcher included in the data corpus any incident (empirical observation) that was in the "line of sight" of the researcher. An incident was understood to occur whenever actions or interactions related to any one of the following change issues: *why change was happening*, *what the change was about*, *how the change should unfold*, or more specifically interactions where sentiment was expressed on any of the following (*discrepancy, appropriateness of solutions or way forward; principal support; efficacy* or *valence*) (Armenakis & Harris, 2009).

Every document, email, formal recorded conversation or informal conversation related to any incident was captured and entered into the case study database. When an incident was identified, the bracketed string of words required to describe it included: date of occurrence; the actor(s) involved; the action or behaviour that occurred, the source of the information. The researcher was aware though that, even though he was the lead on the case, not every incident could be recorded. As an example, informal conversations between any of the actors outside the direct line of sight of the researcher would be unknown to the researcher. This is the usual limitation with any real-time qualitative study (Corbin & Strauss, 2008).

To improve the reliability and validity of incident construction, two actors who were part of the change journey were asked to review whether any incidents were missing or incorrectly described. No actors raised concerns on the accuracy or absence of any incidents. As much of the data were actually recorded and/or submitted in writing, the accuracy of what was said by different actors could be easily validated.

5.10. Narrative – first attempt

The next step was to identify theoretically meaningful events from the incident data. In an early iteration metaphors developed through pattern coding (exploratory or inferential codes that identify an emergent theme, configuration or explanation) were used as suggested by Saldanha (2009). Themes such as "where there's smoke there must be fire" and "the calm before the storm" were used to pull together and summarise a lot of material.

As the analysis matured and moved beyond the narrative, it became clear, however, that the metaphors were over utilised and therefore lost their value. The metaphors and catch phrases worked well when used in the formal analysis, as labelled themes within the causal loop diagrams (covered in Chapter 7). The narrative was also too lengthy and cumbersome, as the researcher in his excitement at having access to rich data with thick descriptions, was inclined to include every piece of data and incident observed. This proved inefficient and the researcher sought a new organising device.

5.11. Narrative – revised

The new central organising device was to put the events into a temporal sequence by making use of two abductive strategies, namely a visual mapping strategy and a temporal bracketing strategy, following Langley (1999) and Van de Ven (2007). The visual mapping strategy entailed using a diagram to show how incidents unfolded by event categories over time. Similar to Lichtenstein and Plowman (2009) and Perlow and Repenning (2009) the temporal bracketing strategy supplemented the visual mapping strategy and entailed arraying the various categories of events over time, within the phases of change.

Events then were identified using a combination of 2nd cycle pattern coding and process coding methods, using gerunds ("-ing" words) to connote action in the data, for example, mobilising and forming a coalition (Saldanha, 2009). Events were selected based on assessing the impact of the incident/s on the next set of incident/s by assessing how influential the incident/s were on shaping the five change beliefs highlighted by Armenakis and Harris (2002). Similarly events were presented to two actors with the intent of receiving input on the selection of events. For brevity, the summary of events using process coding, visual mapping and temporal bracketing strategies is highlighted in Figure 5.1.

Figure 5.1.   Summary of event mapping using process coding

DISEQUILIBRIUM STATE (PHASE ONE)

- 6.3.1. Persisting with perceived discrepancies	- 6.3.2. Mobilising & forming a coalition (1st Steerco)	- 6.3.3. Increasing others discomfort by exposure to perceived discrepancies	- 6.3.4. Strengthening of coalition through influencing core change beliefs (2nd Steerco)	- 6.3.5. Resolving all known doubts (3rd Steerco)	- 6.3.6. Setting tactics for approaching others (4th Steerco)	- 6.3.7. Confirming movement away from status quo (1st industry session)

TENSION & THRESHOLD/ AMPLIFYING ACTIONS (PHASE TWO)

- 6.4.1. Increasing engagement & amplifying feedback	- 6.4.2. Debating different views	- 6.4.3. Keeping coalition intact (5th Steerco)	- 6.4.4. Rationalising differing views	- 6.4.5. Selecting solutions & dismissing conflict (7th Steerco)	- 6.4.6. Silencing differing views	- 6.4.7. Signifying tentative buy-in (2nd industry session)
- 6.4.8. Growing mistrust & concern	- 6.4.9. Limiting rich engagement	- 6.4.10. Rising frustration	- 6.4.11. Signalling willingness to engage & co-design solutions	- 6.4.12. Growing concerns unanswered	- 6.4.13. Depreciating alternative perspectives (8th Steerco)	- 6.4.14. Intensifying tension & emerging threshold event

EMERGENCE (RECOMBINATION/SELF ORGANISATION) (PHASE THREE)

- 6.5.1. Mobilising & supporting alternative emerging solutions	- 6.5.2. Compromising to obtain support	- 6.5.3. Shifting alliances (Final Steerco)

STABALISING FEEDBACK (PHASE FOUR)

- 6.6.1. Breaking up old coalition	- 6.6.2. Mandating & returning to usual administrative structures

5.12.   From event sequence to story narrative

Pentland (1999) and Van de Ven (2007) highlight that aside from the narrative describing a sequence of events; the following features in the story should also be included:

- **Sequence in time** – the events or actions referred to in the narrative are understood to happen in a sequence. The two analytical strategies helped to bring this out even further.

- **Focal actor of actors** – the characters provide a thread that ties the events in the narrative together

- **Identifiable narrative voice** – the researcher as an insider and narrator of the story whose voice is presented as a third party observing the actions and interactions

- **Canonical or evaluative frame of reference** – narratives carry meaning and cultural value because they encode, implicitly or explicitly, standards against which the actions of the characters can be judged.

- **Other indicators of content or context** –the narrative highlights where Steerco discussions occurred, where industry discussions took place, whether the dialogues were formal or informal/private.

The narrative is provided in Chapter 6. On reviewing the narrative, the process coded events, and whilst reflecting on the main research question and underlying theory, the researcher developed a set of sub-questions per phase that assisted in answering the main research question. However to answer these sub-questions and develop a process theory of change, the need was to go beyond a surface description (Sandelowski, 2000) to penetrate the logic behind observed temporal progressions and to build theory by climbing up the ladder of abstraction (Langley, 1999). The explanation should identify the generative mechanisms that cause observed events to happen in the real-world, and the particular circumstances or contingencies when these causal mechanisms operate (Van de Ven, 2007).

The researcher was uncomfortable with stopping at the narrative, taking into account Eisenhardt's (1991) injunction that better stories *and* better constructs make better theory. Hence an attempt was made to find the linkages between constructs that demonstrate development of a meso-level theory.

5.13. 2nd cycle coding

As noted by Saldanha (2009) second cycle coding methods (if needed) are advanced ways of reorganising and reanalysing data coded through first cycle methods. They required fitting categories one with another to develop a coherent synthesis of the data corpus.

The goal though was not necessarily to develop a perfectly hierarchical bullet-point outline or list of permanently fixed coding labels during and after this analysis. In qualitative data analysis, some interpretive leeway is necessary - indeed creativity is essential to achieve a new and hopefully striking perspective about the data (Saldanha, 2009).

How second cycle coding and development of categorical, conceptual, thematic and theoretical organisation from the array of first cycle codes was achieved is described below. The main analytical methods were causal loop diagramming, focused and characteristic coding and codeweaving. Analytic memos (included in the case study database for transparency) were used extensively as a sensemaking device to reflect on the process. These methods were used dynamically and there is no

clean, linear manner to describe how each method eventually synthesised the outputs. An example of the actual thoughts via analytic memos is highlighted below to illustrate the challenge and frustration the researcher experienced during the process.

5.14.   Causal Loop Diagramming and Codeweaving

After working through the 353 1st cycle codes (including the provisional codes) and the revised narrative, the next step was to identify how codes and categories linked together. The challenge to move up the ladder of abstraction by demonstrating linkages between codes, categories, concepts/constructs, themes identified and how these came together via causal loop diagrams is highlighted through one of the analytic memos recorded during the process.

> *[The aim was to continue after first cycle coding to craft analytic memos by reviewing primary documents linked to […] key events.*
>
> *[…] what will the reflection and memoing produce? I wasn't certain how one would move from first cycle coding, to second cycle coding whilst continuously memoing and then what does one do with all this data. How does it come together?*
>
> *I re-read portions of Saldanha and Corbin and Strauss, which still did not give me a sense of how this would come together.*
>
> *I decided to go back and review Perlow and Repenning on the Dynamics of Silencing Conflict. After a few reads I realised that their model was a Stock and Flow model (SF) usually associated with System Dynamics and Systems Thinking. I decided to get a better grasp of how these Stock and Flow models actually come together. In finding pieces of material on this, I discovered that the first stage is a Causal Loop Diagram (CLD).*
>
> *The process that led me to this path was a futile attempt to try and put together a model. I just could not understand how the codes generated from the current first cycle coding would fit into a model. I found myself simply trying to link codes and it just didn't make sense or hang together.*
>
> *This was the start to reflecting on CLD and SF models. I picked up a good article that described the mathematics in transforming a CLD to a SF. This led to discovering a book by Sternman (2000) which appears to be a key text on grasping how to construct CLDs and SFs.*
>
> *After reading the text I got to understand that CLDs and SFs are relevant to capturing the dynamics of a system. The causal loops reflect either a reinforcing feedback loop or a balancing loop. These loops in combination explain and predict the behaviour of a complex system. An SF model just doesn't come together, but is an evolutionary, iterative transformation of a CLD. I also understood the weaknesses of a CLD.*
>
> *It became clear that a CLD was what I had to first put together. After grasping the basic rules for drafting a CLD - I attempted to put a CLD together for the case. It took a few iterative cycles and I eventually pieced together a draft CLD. I felt like something was missing or more specifically like this process of getting to a CLD was not sound or scholarly.*

I tried to move from the CLD to the SF model without following the transformation guidelines. After a day and half of effort, I gave up on this. My main motive was to short circuit the process and get to a sophisticated and elegant model like Perlow and Repenning. I kept asking how they got to their model. [After some time] what became clear is that this must have taken many hours of reflection, debate, discussion to unpack the key constructs - which are stocks and which flows. These constructs provide the best explanation to [the story unfolding] in the case.

[...]Something still didn't feel right.

After a frustrating evening, sleep provided some solace to quietly ruminate on what wasn't making sense. I eventually realised that one of the things that focused the Perlow and Repenning and case was the research question. Their research question was clear - how and why does silencing conflict become a norm? Their model was then built up gradually from the case data to help answer this research question.

I then moved back to my research proposal to review my research questions and determine whether my rough cut first CLD could answer the questions. After reviewing the research questions - I became concerned that the research questions were [too broad] and not guiding the model development.

I realised that answering these questions by using a CLD and capturing the dynamics that lead to correlation, aggregation, and disaggregation is a relevant technique as it captures the causal links between codes, categories [and constructs] over time.

What also became clear about my discomfort with my draft CLD was that I built the model from memory of the case [narrative and related codes/categories identified]. I also realised that my preliminary model (initial conceptualisation) was making me find/select data that fit the model.

Having realised this, I decided, after remembering a stark caution by Miles and Huberman that if you go looking for something you will find it, to rather back track and build the CLD model, gently and iteratively from the data. This is also more scholarly (building using a chain of evidence). I will still utilise the a priori conceptual framework to review data and codes but would reflect critically through the analytic memos to attempt to draw linkages between codes/categories from the data. I'm beginning to also see and feel a bit more liberated in the understanding and prompts by Miles and Huberman, Saldanha and Corbin and Strauss that memos are your friends!!! Use them extensively. So this is where I am at. I'm going to go 2 steps backwards and review the main events, related primary documents and initial codes, and see if I can successfully build a CLD embedded in the data (328:1, 3-54).]

Causal loop diagrams were identified as the appropriate method to assimilate the codes and categories and build a process theory. They provided visual aids in terms of how constructs and processes come together dynamically. Telling the story, identifying the underlying codes, categories and constructs from the story and bringing these together through the causal loop diagramming was the emergent method selected to map out how change emerges over time. This method is common in systems thinking and system dynamics (Senge, 1990; Sternman, 2000). As noted by Perlow and Repenning (2009), causal diagrams have a rich history in organisation studies (e.g., Masuch, 1985;

Sastry, 1997; Weick, 1979) and provide a convenient and precise technology for articulating process theories (e.g., Mohr, 1982; Pettigrew, 1997).

The causal loop diagrams were then constructed by simultaneously and iteratively reflecting on the narrative, the codes, categories and constructs identified in the 1st cycle coding, the process codes from the events in the narrative, the emerging research sub-questions and the theory. This build-up from the data and the identification of the causal loops were captured via analytic memos to provide traceability of the process. To map out the causal loop diagrams, the iThink system dynamics software was used.

5.15. Focused and characteristics coding

Two additional coding methods were used whilst building the casual loop diagrams. Focused coding searches for the most frequent or significant initial codes to develop "the most salient categories" in the data corpus and "requires decisions about which initial codes make the most analytic sense" (Saldanha, 2009, p. 155). Decisions on which codes make the most analytic sense were made during the simultaneous analytic memoing and causal loop diagramming processes to see which codes best explained the evidence (data) gathered. Competing plausible explanations are captured within the analytic memos as well (Van de Ven, 2007). The goal of focused coding was thus to develop categories without distracted attention at this time to their properties and dimensions (as required by Axial coding).

Characteristics coding, a streamlined adaptation of grounded theory's classic Axial coding, was also used. This is where initial codes such as social skills were used, only to realise through reflection on other codes that this was a category, with related subcategories. To unpack these, *characteristics coding* was used to determine the properties of the main category (social skills).

The reason for opting for characteristics coding, with an emphasis on the properties of a category was that Charmaz (2006) and Dey (1999) take issue with Axial coding perceiving it as a cumbersome step that may stifle analytic progress. Corbin herself downplays the method in her later edition of grounded theory procedures (Corbin & Strauss, 2008; Saldanha, 2009).

5.16.   Codeweaving

Lastly, to suggest causality between codes and categories identified in the data, the method of codeweaving was used. One of the most critical outcomes of qualitative data analysis is to interpret how the individual components of the study weave together. Codeweaving is the actual integration of key code words and phrases into narrative form to see how the puzzle pieces fit together. Codeweaving identifies how items interrelate, suggest causality, and indicate a process or work holistically to create a broader theme (Saldanha, 2009).

Chapter 6 captures the rich, thick narrative and Chapter 7 presents the formal analysis using causal loop diagrams as the method to articulate the process theory. Meso-level propositions per phase of change are then articulated and represent building blocks in the emergent dynamic process theory of how and why change happens.

5.17.   Ensuring validity and reliability

Qualitative analyses can be evocative, illuminating, masterful – and wrong. The story, well told as it may be, may not fit the data. Reasonable colleagues double-checking the case may come up with different interpretations (Miles & Huberman, 1994). The rigor of qualitative research has thus often been called into question (Gibbert et al., 2008).

To address rigor, the study adopted three strategies identified from papers that are considered exemplars of rigorous qualitative research and thus worthy of imitation (Gibbert et al., 2008).

The first strategy was **"talk the walk".** Instead of merely providing primary reports (a casual reference to the importance of validity and reliability), in depth secondary reports of how rigor was achieved are provided above. Exemplar papers took a very conversational but detailed approach in walking the reader through the major parts of their methods, including case selection, data collection and data analysis (Pratt, 2008, p. 503) and this research adopted a similar style.

The second strategy was that of **"not doing last things first".** Exemplar studies that upheld the standards for rigor in case study research required case studies to first prioritise internal validity and construct validity over external validity. This study adopted the same strategy with a focus on internal validity and construct validity (embracing specific tactics as described). There was no preoccupation with external validity. Importantly, the three validity types are not independent of

each other. Without a clear theoretical and causal logic (internal validity), and without a careful link between the theoretical conjecture and the empirical observations (construct validity), there can be no external validity in the first place (Cook & Campbell 1979, p. 83; Scandura & Williams, 2000, p. 1261). Thus, there is a hierarchical relationship among validity types, with construct and internal validity acting as a condition *sine qua non* for external validity (Gibbert & Ruigrok, 2010).

The third strategy was that of recognising that **"necessity is the mother of rigor".** The methods section described openly and honestly some of the challenges and problems that were encountered along with the means used to deal with them rather than not reporting them and coming up with a "neat" methodology section.

As examples the pain of being stuck not knowing how to move forward after 1st cycle coding and then discovering the causal loop diagramming method or the frustration of having a narrative that was too lengthy and the discovery of using a visual mapping and temporal bracketing strategy to address this was highlighted.

The different tactics to address four validity types (construct validity, reliability, internal validity and external validity) to establish the quality of any empirical research, including case studies, has been covered in the design and methods sections and is summarised in Table 4.1.

5.18. Limitations of the design and method

At the outset, four limitations to the research design and methodology were anticipated.

The first related to the nature of real-time longitudinal qualitative studies. These studies require prolonged engagement and persistent observation (Babbie & Mouton, 2003). The researcher had to remain fully aware and "on his toes" in identifying data and incidents on an on-going basis. There was no room for lethargy. Using Atlas.ti and a structured case study database helped greatly to keep the researcher aware of what was going on during the case.

Further, talking to a close friend and outsider (Taki Tumazos) on a daily basis on what was going on in the case also helped in minimising missing data and incidents. Some conversations with Taki have been captured in the memos. Talking to an outsider on a regular basis is encouraged by some methodologists (e.g., Miles & Huberman, 1994; Saldanha, 2009). In a real-time design these engagements became important for reflexivity (Van de Ven, 2007).

The second limitation was that of disguising the content of the case in order to protect the industry and industry association. In doing so, the challenge of not being able to describe the services as they are, prevents the reader from intelligibly engaging with the actual content of the change and following different actor's arguments. The reader is left to trust the descriptions and claims with regard to properties of particular services (e.g., Service C is less risky and more efficient than Service A is a claim which the reader has to accept, rather than having the ability to assess such claim on their own). To overcome this limitation, descriptions of the Services are positioned up front in the narrative and evidence of the claims to properties are presented in actors own words, with counter claims also presented.

Another limitation related to protecting actors and the industry leading to the disguising of the content, makes the reading of the narrative potentially demanding. To help overcome this limitation, organising frameworks are presented at the beginning of the narrative for example contextualising where different role-players fit in. Another technique utilised was the use of focal actors and an identifiable narrative voice to enhance readability (Van de Ven, 2007).

Thirdly, although the codes, categories and concepts used in the causal loop diagrams are embedded in the data, the hypothesised linkages remain tentative. Further studies should test the theory developed. A potential limitation sometimes noted by single case researchers is that single case findings are not generalisable. The view here is that this is inappropriately seen as a limitation. As noted, generalisation is not the primary objective in single case designs. Nevertheless, generalisation for single case studies is possible. But it is not automatic. The generalisability of case study findings is demonstrated through showing the linkages between findings and previous knowledge (Babbie & Mouton 2001; Eisenhardt & Graebner, 2007; Gibbert & Ruigrok, 2010). Theory is not only helpful in designing a case study but also becomes the vehicle for generalising case study results (Yin, 2012).

A final limitation relates to the utility of causal loops diagrams. Causal loop diagrams present a valuable means of representing what goes on dynamically from a system perspective. They are mostly used prior to simulation analysis, to depict the basic causal mechanisms hypothesised to underlie the reference mode of behaviour over time, that is, for articulation of a dynamic hypothesis of endogenous consequences of the feedback structure (Sternman, 2000). However "unstructured" causal loop diagrams do have limitations. Unstructured causal loops do not depict for example stocks, material flows, auxiliary flows and information dependencies. From this review new linkages

may be found and old linkages refined. A future study could enhance the initial causal loop diagram to a structured CLD and then on to a Stock and Flow model (Groesser & Schaffernicht, 2012; Schaffernicht & Groesser, 2011).

5.19. Conclusion to the review of the design and methodology

Part II presented the research questions, design and methodology. Based on the nature of the research questions, a real-time longitudinal single case study design was motivated. The unit of analysis was defined as organisation change and the case selected to represent this was an instance of change, spanning a three year period, in a complex industry level organisation based nationally within South Africa. Part II also covered transparently and intentionally detail of the initial and emergent choices with regard to methods utilised.

The research purpose was to describe, interpret and explain how and why organisation change emerges. To achieve this a detailed narrative identifying incidents and events (through process coding) is covered in Chapter 6. To climb up the ladder of abstraction and build a meso-level dynamic process model, systems dynamic methods are used (covered in Chapter 7).

Part III: Narrative, Formal Analysis, Discussion & Conclusion

Chapter 6 delves into the *in situ* public and private (background) conversations, incensing debates, stories sold and told, during the three year drama. These shape the overarching narrative. The narrative inlcudes a variety of discourses (talk-in-interaction and texts). It provides the necessary platform from which to slowly rise in levels of theoretical abstraction, through emergence and identification of research sub-questions. Again, the read may be demanding but necessary to demonstrate transparently how theory was built from the data up.

Chapter 7 hooks onto the narrative and moves from storytelling to recognition of codes, categories and themes extracted from the narrative through contemporary data analytic techniques. Interweaving these through causal loop diagrams whilst still maintainng a close linkage with the data provides a *bona fide* and traceable meso-level change theory.

Chapter 8 reflects on the theoretical contribution that starts to merge the seven gaps highlighted in Chapter 2. Contributions to complexity theory and the contribution of a quad motor theory support previous scholarship.

Chapter 9 shifts from the strong theoretical emphasis of the previous Chapters 7 and 8 and brings on equal par the importance of a pragmatic contribution of the research: explicating a possible code of change. Ten "take outs" from the research including practical, actionable tools and tactics conclude the research contribution.

6. Narrative – stories about change at an industry-level organisation

6.1. Introduction

This chapter presents selections from the data captured for the case, in the form of verbatim transcriptions, based on the principles of thick description (Geertz, 1973, 2003). Its usefulness demonstrates how good storytelling and qualitative description have validity as valuable and distinctive components of research methdology (Sandelowski, 2000). The purpose here is to build theory from the ground up. The criterion for the selection of events was captured in Chapter 5. As noted, qualitative data were amassed over 3 years, and comprised 374 primary documents and over 3500 pages of additional data, such as anonymised meeting transcripts. The full data are available on CD, lodged with the university's business school. This chapter focuses on material relating to what goes on within and between the four conditions/phases of organisational change (Lichtenstein & Plowman, 2009), employing summaries of events to link these (Van de Ven, 2007).

Presenting the data in the form of thick description first has four main motives:

- To present the data in a condensed yet readable format to contextualise the case and expand on its rich, ideographic nature.
- To familiarise readers as fully as possible with the case, so they can assess the validity of the formal analysis presented in Chapter 7.
- To provide material that can be tested with some of the key actors to confirm that the narrative is an "accurate" account of events, thus improving content and internal validity.
- To demonstrate how the narrative aided the researcher to reflect on the main events that occurred during the change process and identify the main codes, categories and themes involved in building theory (Chapter 7). The narrative also helped in ordering the research sub-questions (Chapter 7).

6.2. Background and context: the case itself

6.2.1. The nature of the change

The case is an instance of change within a South African financial services industry-level organisation. The organisation has for some years been providing services to the citizens of a single country. For a long while, many disadvantaged citizens of the country were not allowed to use certain services, for political reasons. To remedy this, a new service, Service A, was created, targeted at those previously disadvantaged.

The law permitted Service A to be processed (serviced) before any other service, giving an advantage to those service providers offering Service A: their Service benefited from privileged processing. By contrast, Service B has existed for many years, but is used by sophisticated and advantaged citizens only. These citizens are advantaged in having online electronic access to such services without the need to deal with service providers face-to-face.

Certain principles inform the level of efficiency and risk – and the balance between these factors – for any service, and the quality of a service can be assessed against these. Although Service A addresses the need to serve previously disadvantaged citizens, it does not meet the principles guiding the design of higher quality services. It is perceived as more risky and less efficient – for example, there are many more citizen complaints about it than about Service B. Further, the design of Service A raises doubts about whether it was actually requested by citizens; among complaints, citizens point out that they never gave consent for such a service to be rendered and this has a material consequence for them.

Changing circumstances over time have created a need for decisions about existing and potential new service offerings. The fairness of continuing the privileged processing of Service A above Service B has been questioned, especially since Service B is perceived as being superior in quality to Service A. On the other hand, some parties note that Service A was created specifically for disadvantaged citizens and advocate the continuation of differentiated servicing.

These debates led policy makers to suggest the creation of a new Service C (to be offered by all supplying parties) that would replace the privileged processing of Service A and level the playing fields for all service providers. Table 6.1 and 6.2 presents a guide to the content of the change.

Table 6.1.   *Glossary of Services Under Discussion During Case*

Services	Description	Offered by	Receives privileged processing	Aligned with principles	Citizen consent known	Level of risk	Level of efficiency
Service A	The offering current at the start of the change process, aimed at historically disadvantaged citizens Jointly developed by all parties in 2005	Provided by DemAlliance	Yes, above Service B	Low alignment	No	High	Low
Service B	The offering current at the start of the change process, aimed at more sophisticated citizens Offered directly by ThinkCo members only to their constituency	Provided by ThinkCo	No	High alignment	Yes	Low	High
Service C	Proposed new service to address the perceived discrepancies in current service offerings and level the playing fields	Conceptualised by main coalition driving the change (Steerco made up of ThinkCo and RegCo)	Yes, above Service A	High alignment	Yes	Low	High
Service D	The new service that emerges through the change process	Emerges after intensified tension Proposed by the industry	Yes, above Service A	Medium alignment	Yes	Low	Medium
Service W	A proposed new service conceptualised after Service C received limited buy-in	Proposed by some of the Steerco to get buy-in from all stakeholders by compromising on some of the espoused principles	Neutral processing	Medium alignment	Yes	Low	Medium

Table 6.2. *Additional Commentary on Services*

Services	Additional comments
Service A	Receives advantaged processing over all other services, by law
Service B	Initial perception by Steerco – service offering perceived as less risky and more efficient than other services: it should thus not be disadvantaged
Service C	Initially preferred as the new solution by Steerco as likely to improve citizen consent of services, increase efficiency of services provided and decrease citizen complaints. Claimed to be impractical and costly to implement by vast majority of ThinkCo and DemAlliance members Ultimately received very limited buy-in from both ThinkCo and DemAlliance members
Service D	Eventually supported by all parties: ThinkCo & DemAlliance
Other initiatives	**Description**
Project Integrate	A project started before the change process and runs in parallel to what is happening during the change process. The project was meant to address many of the concerns raised around services. The scope of Project Integrate does not address the concerns of privileged processing of services. The project provides the standards to help improve quality of services offered by reducing risk and improving efficiency

6.2.2. Industry organisations involved in the change process

The main party is financial services industry organisation ThinkCo, under which the core body of participants are represented. It was set up during the 1990s and empowered via legislation. Under ThinkCo's auspices the industry mobilises to develop and improve policies and practices. ThinkCo is often considered the platform for bringing parties together to serve citizen needs by co-developing (and sometimes jointly producing) services, and for facilitating these services. There are 24 ThinkCo member companies (Co1, Co2 etc.) who are mandated by law to register as members of ThinkCo provided they offer any of the services under the ThinkCo structure.

However, the industry boasts no less than 10 other significant role-players. Their relationships are summarised in Figure 6.1 below. Of these, two others have the greatest significance for the case. RegCo is the entity governing ThinkCo. It stands independently and is mandated by government to set public policies, look after the greater good and ensure fair and transparent consultation with all relevant parties to enable their respective constituencies' voices to be heard. RegCo has a close alliance with ThinkCo for historical reasons.

DemAlliance represents all industry associations outside ThinkCo. These associations are mandated to represent their constituencies' interests.

Figure 6.1. Depiction of Industry Role-players
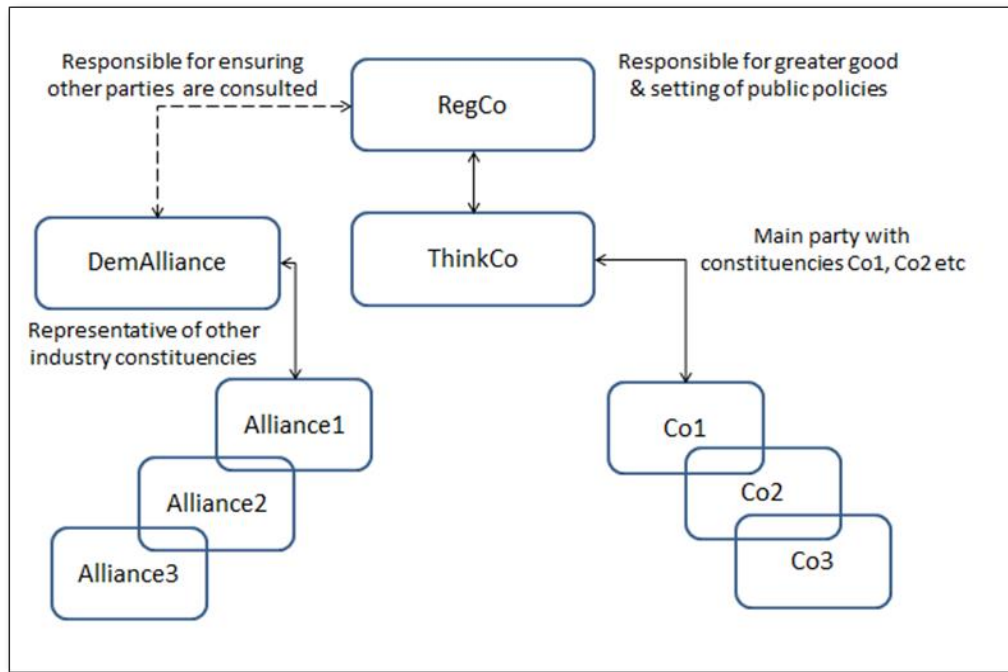
6.2.3. Main actors (characters)

Because of the requirement for company confidentiality, and the ethical agreement under which observation and data-collection were undertaken, all company names and the names of all individuals involved in the case have been replaced by pseudonyms. The organisational affiliations of the main actors are captured in Table 6.3.

Table 6.3   *Parties and main actors*

Party	Main Actors
RegCo (national executive committee)	Nelson, Jack, Gwen and Joe & 2 other actors
ThinkCo (top management)	Tom, Des & Oliver
ThinkCo members	Referred to as actors
DemAlliance (top management)	Helena and Pat
DemAlliance members	Lin and other actors

6.2.4. Data conventions within narrative

Table 6.4. *Editing Conventions Used In Narrative*

Data Collection Method	Data types	Rule/Convention	Example
Recordings (transcripts)	Verbatim speech of actors (first person)	For verbatim responses from actors: • The name of the actor precedes the quote • The quote is indented • The quote is in italics	It became clear that Joe remained concerned about the perceptions of unhappy parties. *Joe: okay, let's just look at it from the other side. […] Now how are we going to back that one? (149:225, 44-50)*
Written participant feedback (e.g., via emails)	Actual written expressions by actors (first person)	For actual written responses from actors: • No name precedes the quote • The quote is indented • The quote is in italics	They reviewed and assessed the data and Des also tested their analysis with Tom, who agreed with the conclusions. *Very good picture of what's happening. I agree with your conclusion – which does not support that of […]. (56:1, 1-1)*
Observation or reflection	Researcher observations through field notes and analytic memos (second person – observer)	For researcher field notes and analytic memos: • The excerpt is annotated by [ ] • No name precedes the excerpt • The paragraph is indented and in italics where the intent is to draw attention to the data Or The font is in normal font where the evidence is used within the storyline or narrative. References are in italics	Even though it appeared that all Steerco members were on board, two events demonstrated that tensions continued to build. As Des and Tom were going down in the lift: *[Tom indicated that he was not worried about Joe and his fixation with Service D. He felt the meeting was extremely positive and that we were all on the same page]. (149:231, 296-298)* There was acknowledgement, based on the feedback from different parties and constituencies that the current services had inherent deficiencies and quick alternative solutions were not the answer. *(149:220, 15-16)*

6.2.5. Introduction to the narrative

The narrative is presented by drawing attention to 26 events in chronological order, across four phases of change (Lichtenstein & Plowman, 2009). A visual mapping and temporal bracketing strategy is used to identify events (Langley, 1999; Van de Ven, 2007). Whilst incidents are operational empirical observations, events are abstract concepts of bracketed or coded sets of incidents. The decision rules for identifying incidents are captured in Chapter 5.

The stream of incidents, a directly observable first-order set of activities, is translated into a sequence of events, a more abstract second-order construction (Van de Ven, 2007). Each of the events is bracketed by a pattern code – which in this case is also a process code (e.g., *persisting with perceived discrepancies* (Corbin & Strauss, 2008; Miles & Huberman, 1994)).

Pattern codes are appropriate for case studies with large amounts of data. They are explanatory or inferential codes, ones that identify an emergent theme, configuration or explanation. They pull together a lot of material into a more meaningful and parsimonious unit of analysis. They are a sort of meta-code (Miles & Huberman, 1994; Saldanha, 2009). Process codes have already been explained.

The events are summarised in Figure 6.2. The narrative voice is that of the researcher; an insider observing the unfolding change processes in real time.

Figure 6.2.   Summary of Events: Visual Mapping & Temporal Bracketing Strategies
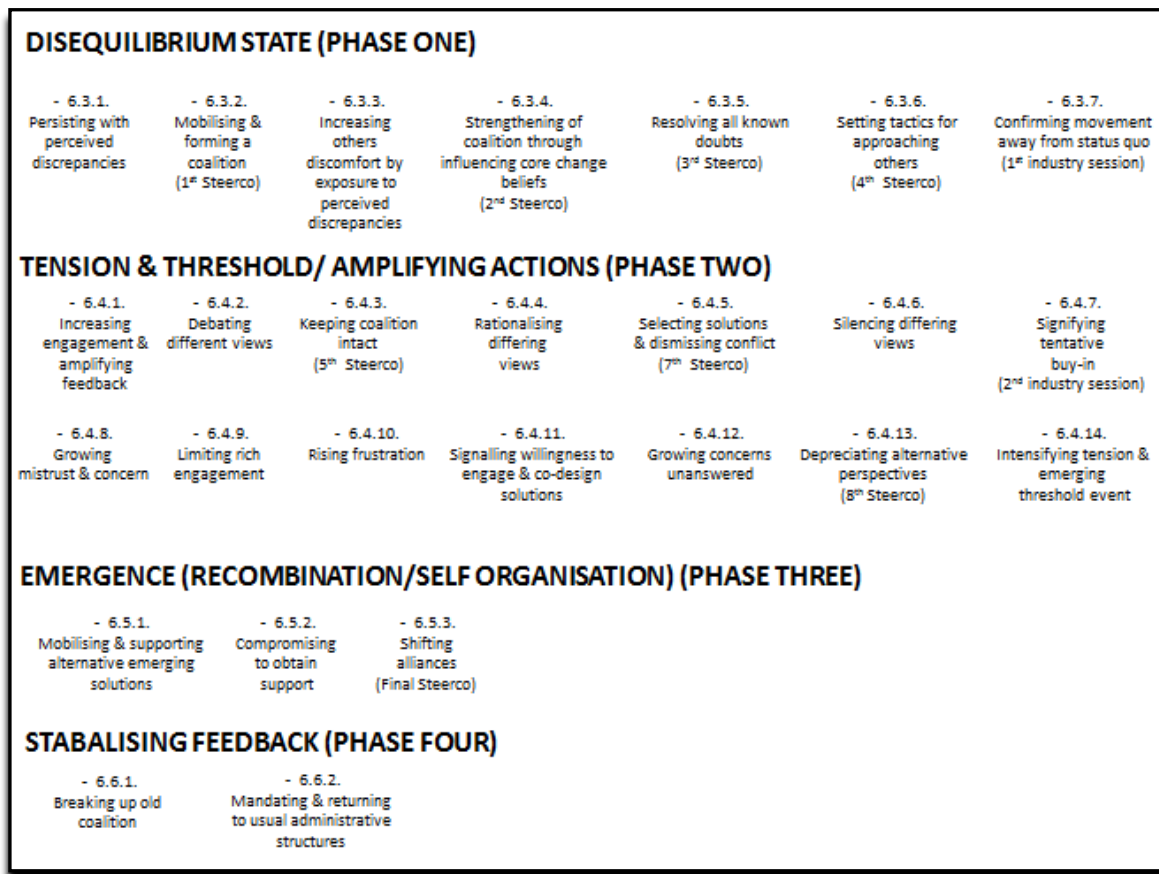
6.3.   Disequilibrium state: Phase One

The disequilibrium state began as a result of actors persistently raising their perceptions of problems with top policy makers. A coalition (Steerco) was formed and, after multiple Steerco engagements, even those coalition actors who were doubtful or hesitant were eventually convinced as all known issues were systematically resolved. Exposing the industry to the perceived problem and proposed solutions created discomfort and resulted in a movement away from the status quo. The narrative below describes the events (from July 2010 to March 2012) leading to the intensifying of the disequilibrium state.

Figure 6.3.   7 Events that Shape the Disequilibrium Phase
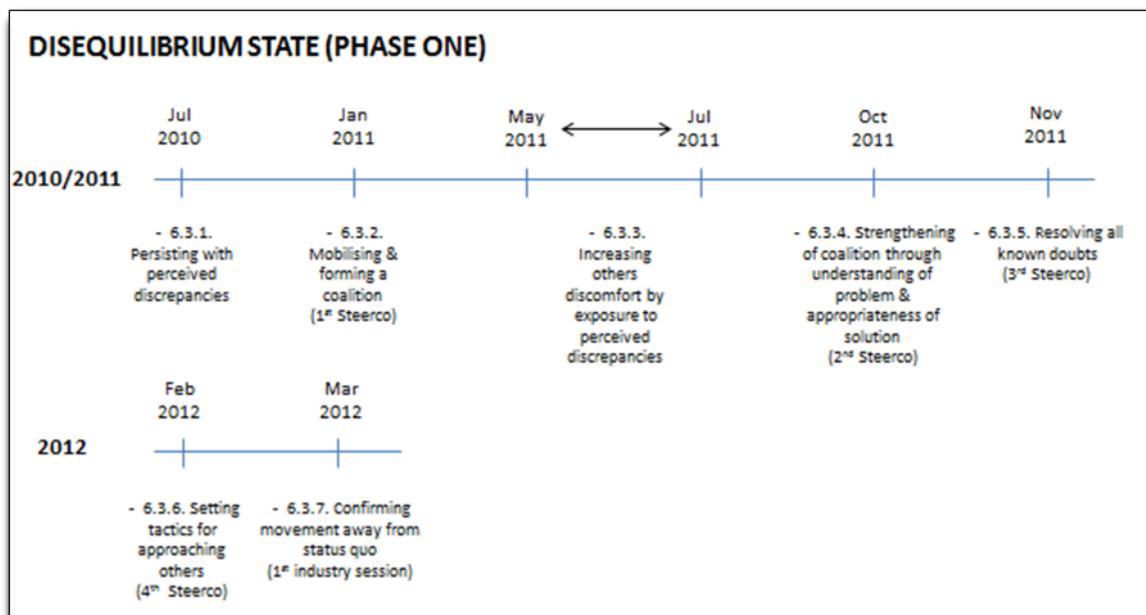
6.3.1.   Disequilibrium begins - persisting with perceived discrepancies – Jul 2010

Service A was a joint effort of ThinkCo and DemAlliance in 2005. However, an increasing number of issues emerged from service delivery and affected it, persisting and remaining unresolved during 2010. After a number of attempts to address these with ThinkCo, DemAlliance members reached a point of deep frustration.

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Helena wrote on behalf of DemAlliance to Nelson at RegCo, pleading on behalf of her party for his urgent intervention on these operational issues, because RegCo bore the responsibility to:

> *[…] promote fair access for parties who offer services […] to the constituencies we serve. (1:1, 250:600)*

Helena's concerns were operational: agreed service levels were not being met.

> *The availability of Service A feedback data in time for these parties […] had been an undertaking from inception, however currently and frequently not met in practice. (1:10, 1485:1691)*

Further Helena expressed a concern about perceived unfair practices by some ThinkCo members.

> *Relevant in the current scenario, is the [perceived intentional] conversion of traditional Service A to other services. We believe this to be an unfair practice [disadvantaging current Service A providers]. (1:11, 1698-2010)*

She suggested that ThinkCo members were aware of these issues but refused or were slow to act:

> *What makes the situation even worse, even where change requests were approved through the ThinkCo process, requiring action for implementation, these are not done on time, as would be expected or not done at all. (1:19, 495-721)*

> *[…] representatives of ThinkCo attend our party's monthly meetings. The matters addressed in here are not new to them as it had been tabled, discussed and debated with no satisfactory outcome or resolution to date. (1:21, 970-1251)*

During the same period, Tom had been approached by a number of his constituents with other concerns about Service A, especially that Service B was excluded from the privileged processing available to Service A. Because Tom believed that Service B was better aligned with the policy objectives and principles espoused by RegCo over a number of years, he saw Helena's operational concerns as a cue to question perceived policy misalignment and frame the issue in broader terms in similar correspondence with Nelson, seeking his intervention.

> *With reference to our previous discussions in this regard, I would hereby like to suggest that you consider an amendment to the policy in order to allow ThinkCo members to process Service B together with Service A. (2:1, 9-9)*

> *However, Service B was unfortunately not included in the policy at the time, which we believe was more an oversight, rather than by design. (2:3, 13-13)*

In terms of RegCo's original principles, which were again re-iterated in 2010, Service B type services should be encouraged and preferred. Service B meets the criteria, and yet today has a lower status to Service A. (2:5, 15-15)

Supported by the motivations listed above, we request your favourable consideration for an amendment to the policy, and would be happy to assist in any way to achieve this speedily. (2:13, 19-19)

Based on these communications and on-going discussions during 2010, Nelson decided to host a session with his core team and ThinkCo in January 2011. His perception of disturbance already existing within the system, with the prompting and evidence contained in Helena and Tom's correspondence, moved the organisation and its partners towards increased activity around the options for service provision.

6.3.2. Mobilising and forming a coalition- Jan 2011

For the planned meeting, Nelson assembled his top executive structure: Jack, Gwen, Joe and two other actors. Tom invited Des and Oliver to join the discussion.

Tom and Des spent time early in January preparing extensively for the session. They assembled material including an account of the principles espoused by RegCo; a diagnosis of the policy changes in 2005 that had led to privileged handling of Service A; and reflections on potential solutions.

> *Tom: This issue has been going around for some time. You'll recall Helena's letter and mine related to the topic. We thought a good approach will be to get a number of us around the table to unpack what the main issues are and [agree] how we take this forward. (4:1, 5-5)*

Much of the session was spent responding to questions and providing clarification on Service A and Service B. One of the actors from RegCo, in particular asked many clarifying questions.

> *Forgive my naivety, please can I ask the following question: What is the difference between Service A and Service B? (4:5, 11-13)*

Des then explained in detail and the explanations were accepted. Nelson, though, was not convinced that the privileged status of Service A should be extended.

> *Nelson: Is this not [targeted at] a different citizen though? Why should they want to have privileges like Service A? (4:12, 19-19)*

Tom: We know that with the recent [servicing issues]; all types of parties are under pressure to have their services handled with priority. Why should Service B be biased […], if in fact the citizen has given ThinkCo members permission for this? (4:14, 20-20). We have to answer a fundamental question and that relates to why Service A was created in the first place and understand what has happened since 2005. (4:13, 20-20)

After covering two different paradigms (what were described as "two philosophies") perceived to be broadly held by the industry, one of the actors prompted the meeting to consider the next steps. One philosophy opposed the dilution of the successful Service A by allowing similar access to other citizens who were not part of the original target group.

The other philosophy took the success of Service A as a sign that an expansion of its privilege to the target group of Service B was needed and would also succeed.

So what are we going to do about this? We could just include Service B? (4:24, 32-32)

Des then laid out the potential change options as they appeared at that point, including the pros and cons of each. The RegCo team declared that any decision must employ a principles-based approach.

Joe: The principles must be used to guide which path we take. (4-26, 36-36). […] if we stick to principles nobody can challenge what we put on the table. (4:29, 41-41)

Nelson though was tense and concerned, holding his head in his hands, he remained doubtful. His main concern was how some stakeholders (mostly DemAlliance) would respond to this. Nelson questioned if creating privileges was not against the principles.

Nelson: I agree with principles but should we be allowing such privileges? (4:31, 42-42). This is going to shake the boat a bit? How will DemAlliance respond to this? (4:32, 43-43). I feel like I am on a precipice and you guys are gently pushing me from the back. (4:33, 44-44)

Joe immediately offered input based on visits with the constituencies concerned.

Joe: From our [on-going] one-on-one visits, this is becoming quite an issue. A number of party members are questioning why DemAlliance was even needed. I agree that if a principles based approach is adopted then we are on sound footing. (4:34, 45-45)

The session concluded by supporting a principles-based, proactive approach to future decisions.

It was agreed that Joe and Des would work together to flesh out the two philosophies and present these to the coalition represented at the meeting, which would function as a Steering Committee (Steerco) for the process. Subsequently, the industry would be approached to test these different positions.

There was agreement to pursue this initiative. There was agreement that a "do nothing option" was not enough. There was agreement that the Steerco was to take the lead *(4:37, 47-47).* Joe and Des could work together to create a draft document which could be circulated for input and comments to Steerco and then this could be sent out to the industry *(4:37, 47-47).*

6.3.3. Increasing others' discomfort by exposure to perceived discrepancies– May 2011 - Jul 2011

Des and Joe worked on drafting a document for industry capturing the two conflicting philosophies. After the first draft document was compiled, Joe added a third philosophy: a risk-based approach involving re-categorising and re-thinking the privileges of all. Joe suggested that only the philosophies be shared with the industry at this stage to test their reactions, but that the strategic options are kept out of the document. Des's preference was for putting all the options out there, so that the industry was aware of where they were heading.

> *Des: My preference is to not 'beat around the bush' with the industry and put the various views and options on the table. (5:4, 5-5)*

> *Joe: Please do not have a fit at the changes. My approach was to try and clarify issues in my mind and raise some of your and my concerns. I have added the "third" Philosophy and a "fifth" [strategic] option. (8:4, 14-16)*

> *Joe: Do you think we are showing our hand too soon? (8:6, 18-18)*

Des and Joe agreed to omit the strategic options at this stage, and only test the philosophies (see Table 6.5) with the industry. Without much further input from Steerco members, the document was finalised and sent out to the industry. The six-section document went out under a cover note, providing brief context for the review. The document was sent to ThinkCo and DemAlliance members. Written feedback was requested by the end of May 2011, allowing close to a month for responses. It was made very clear that this was an open process seeking the widest possible feedback, on the basis of which a recommendation would be made to Steerco.

The purpose of the document is to obtain input from a broad range of constituencies that can help crystallise the debate and assist the Steerco in guiding [policy] action. (11:3, 31-35)

RegCo and ThinkCo have noted that there are potentially two 'camps' that hold diverging views on the growth of Service A. The one camp essentially believes that Service A was created to address a specific citizen base and issue; whilst the other argues that Service A should be open to all. (11:1, 25-25)

There is acknowledgment that the debates are healthy. However, left unresolved there could be unnecessary risk introduced. Clarity and certainty for all constituencies are important. This issue has to thus be addressed. A Steerco has been set up by RegCo to analyse the above. (11:2, 26-26)

In this way, an informal coalition began to form to expose the industry to different ways of considering the problem, planting the seeds for change.

Table 6.5.   *Three Alternative Philosophies Presented to Industry*

Perspective	Main paradigm
Philosophy One	*Service A is growing significantly and unusually, but the success of the service is being diluted due to other citizens using it. Hence service quality has fallen due to the strain this growth places on operations.* *Policy option: restrict access to the service to the originally intended disadvantaged citizen base.*
Philosophy Two	*The success of Service A is a sign that its functionality and service are required and desired by more citizens.* *Policy option: other services such as Service B should be included on an equal footing.*
Philosophy Three	*Go back to established and accepted principles and adopt a risk-based approach of re-thinking all services from these principles.* *Policy option: Re-categorise services and base privileges on these categorisations. Service B should not just be placed on an equal footing with Service A, but should be privileged above other services.*

Many written responses were received from the industry. These are summarised in Table 6.6.

Table 6.6.   *Responses Received after 1^(st) Industry Consultation*

Responses from	Number of responses
ThinkCo and associated members	8
DemAlliance members	4
Total number of responses	12
No responses	2

The responses were diverse; ranging from support for the review and agreement that it was about time that services were aligned with principles, to suggestions that there was a lack of understanding of the environment. Some respondents questioned how the Steerco was comprised, expressed a lack of clarity about the goal of the exercise or made suggestions for face-to-face engagement.

Support for the review was received from some ThinkCo members. However some comments challenged the accuracy of the document and questioned the motive of the review. As an example, one ThinkCo member, who also played a role in the ThinkCo structure, felt isolated and excluded.

> *When the document was first released the constituencies were generally surprised and had very little information on the reasons for such a paper or who was behind it. I received calls from a number of people trying to get facts, unfortunately I was equally uninformed. People were concerned about the potential impact and wanted to know who was behind this and who lobbied with RegCo to have this reviewed. (21:21, 536-536)*

> *The document could have provided more background regarding the reasons, perceived risks and the process going forward. Rather than referring to a Steerco […], it would have been more transparent if you provided the names of the people involved. Parties that wanted to debate the paper or relevant issues could have contacted the correct persons.*

> *The manner in which the document presents the issues creates the impression it was compiled in a hurry, for example it contains factual errors […] that could easily have been verified, and some inaccuracies regarding Service A and its history. Statements were presented as arguments for the philosophies, yet they were not solid enough to support the conclusions that were derived at. (21:95, 537-538)*

The actor also pointed out that not much attention was given to another project – Project Integrate (see Table 6.2.) which he believed could have addressed the issues in a more holistic and structured manner.

Another ThinkCo member raised the issue of the Steerco's purpose not being clear.

> *It is not entirely clear for what purpose the committee was put together and whom it included, however it would appear that none of the key parties, who are actively involved [...] were represented. Certain of the issues proposed are incongruent with the principles originally laid out by RegCo in May 2005 and reflect a lack of understanding of the realities of Service A. Including Service B would encourage privileged treatment for certain constituencies which is contrary to the original principles[...].This is not the [target audience] for which Service A was designed. (21:95, 537-542)*

Other actors noted that the operational concerns in Helena's letter had already been resolved, questioning the underlying motive of the review.

> *The letter submitted by DemAlliance focused mostly on operational issues and concerns. These have largely been addressed and those which have not yet been addressed are in the process of being addressed. This raises the question of whether the letter alone was the reason for the Steerco's establishment, as certain of the proposals contained in the discussion document do not relate to the contents of Helena's letter circulated. (21:96, 834-835)*

Helena also responded on the document on behalf of DemAlliance.

> *Based on the wide ranging issues mentioned [...] the ultimate objective of the request is not clear. (21:80, 924-924)*

> *[...] implementation of any one of the three "views" might lead to massive unintended consequences which currently cannot be predicted. (21:97, 924-924)*

Des and Joe consolidated responses and met to discuss their perspectives and interpretation of the responses and the way forward. The researcher's field notes of this interaction indicate how Des and Joe assessed the responses.

> *[Both Joe and Des noted that a particular ThinkCo member's response was disappointing. They were taken aback by the challenging tone of the note, especially around the questioning of who was on the Steerco and in the workgroup. They also found it quite strange that the purpose of the document which was to try and understand where different stakeholder's philosophies were; was not understood. The statements that the document was rushed and not properly thought through was also not correct and they felt [these] were irrelevant comments. Joe expressed that he was tempted to give the actor a call to chat through his responses to indicate how unimpressed RegCo were with the response. Des also noted his disappointment.*
> *The level of thinking was certainly not from an industry perspective and seemed to be a very protectionist ThinkCo member specific position]. (34:4, 5-5)*

Des and Joe agreed that RegCo was not acting ultra vires in forming the working group.

Though the DemAlliance response was surprising and disappointing to them, Des and Joe were both satisfied that working through the responses had provided a useful understanding of different positions. Des and Joe both agreed and felt that the overall responses gave them a good feel for the different views being expressed by the industry *(34:10, 10-10).* Some views were principle aligned. Most constituencies at this stage, who were also members of DemAlliance, did not support philosophy three, but all supported that further consultation was required *(34:11, 10-10).*

> *[They also agreed that a collaborative and consultative approach would be the right one in order to obtain everyone's support. Joe expressed that this was not going to be an easy journey, as a number of the constituencies see this as a threat to the current status quo. Consultation was going to be key and this was certainly not going to be a quick and easy process. (34:12, 10-10)*
> *Both agreed that further consultation with the industry would be a key success factor, in order to bring everyone up to speed with the understanding of what it is that they are trying to achieve. Joe reiterated that if they stick to the principles it is very difficult to argue against positions that are being tabled]. (34:28, 10-10).*

Des was comfortable with how the discussion had panned out. His sense of the meeting was that we were on the same page.

> *[They were not overawed by the feedback. It had taken them a while to work through the responses and to get to grasp with where different people were in the responses. In the final analysis they believed that the principle-based position or risk-based position, as Joe called it, was still the right approach to be adopted by the Steerco. They both felt that the industry had become accustomed to Service A, without seeing the bigger picture and without seeing the un-level playing fields that was created]. (34:27, 13-14)*

At this stage, believing that a platform was being created to move away from the status quo, Joe and Des prepared to engage with the Steerco. Back at ThinkCo Des sought the assistance of Tom to create a framework for the feedback to the Steerco and re-iterate his belief that although the "cat was now set amongst the pigeons", the feedback had not created any serious concerns about what was envisaged as the proposed solution.

6.3.4. 2nd Steerco – strengthening the coalition through influencing core change beliefs - Oct 2011

The second Steerco occurred in October 2011. Steerco members were waiting in anticipation for Des and Joe to present the findings. The atmosphere was once again relaxed and an air of expectation filled the room *(42:1, 426-554).*

[Joe and Des explained how they came up with their recommendation, stressing the inclusive nature of the process and the robustness of the emerging proposals. Nelson, however, wanted to see how different constituencies responded. Nelson still appeared sceptical and was curious to see how specific respondents felt about the different philosophies]. (42:10, 482-599)

Des's response reflected the origins of Service A, rooted in the intention that had shaped its creation in 2005.

[At this stage he tested with the Steerco if they were in support of the original intent of Service A. All Steerco members present agreed with what was presented. (42:12, 990-1210)
Des then went on to articulate the problem/discrepancy]. (42:16, 2206-2698)

Des categorised the problem. He noted that the problem could be viewed at three levels, namely the strategic, the business and the operational level. He noted that at the strategic level there was misalignment or incongruence between principles and what was going on in practice. He provided two [practical] examples *(42:17, 2776-3147).*

[Des checked with Steerco members that they were in agreement with the problems captured. There was unanimous agreement that the problems highlighted were indeed the current issues that were being experienced]. (42:21, 1361-1612)

With agreement on the problem, Des moved on to cover the much anticipated responses by different constituencies. Des and Joe ran through the overall responses highlighting that there was a mixed bag of responses. There were clearly two major camps the one which supported that something needed to happen and the other that indicated that the status quo should remain, as no clear problem was highlighted *(42:43, 1720-2387).*

[Those who wished to stay with the status quo were seen as merely rationalising pre-decided responses. Des then recaptured the principles]. (42:44, 2391-2995)

Once it was agreed to adopt the principles as a guiding framework for assessing positions, Des presented feedback on different parties' proposed solutions and how he and Joe thought they matched up to the principles. The recommended solution – to create a new Service C – was then tabled and accepted by the Steerco *(42:25).*

Des captured his thoughts on the meeting that evening. He felt that the Steerco was now in synch and acting and moving forward as a single unit.

[This was a positive meeting in the sense that no Steerco member thought we had missed the mark. Getting acceptance that we could move ahead and present the suggested solution with the industry was a significant milestone. Des was still concerned that Nelson in asking to address a number of actions was stalling. What they [Joe and Des] needed to do was to address the actions highlighted by the Steerco, respond to them in terms of their findings and then determine if they could commit as a Steerco to move this forward. Des was also convinced that the meeting was well received based on Tom's comments in the parking area. Tom was complimentary and suggested that the presentation was well done. He believed that [for] Steerco members the crux of the issue was now well understood.

As Joe had noted, the difficulty would be to shift parties' minds - those who were still hooked on the paradigm that the current services were developed for a particular citizen base. Irrespective of the principles [that guided policy choices]; this was not going to be an easy journey. The good news was that as a Steerco they were beginning to operate as one unit]. (42:47, 1336-2908)

These comments indicate a growing belief that the case for change was strong, and that a coalition to support it was strengthening.

6.3.5. 3rd Steerco – resolving all known doubts - Nov 2011

Joe and Des began following up on actions decided at the Steerco. Joe also scouted relevant websites to see what different constituencies were saying. He found evidence of issues giving strength to their proposed solutions:

If anything supports our proposal, it is a quick look at website X and some of the social websites. If this is the tip of the iceberg (being the few [citizens]) that has access to the Internet - what lies beneath? (46:7, 25-31)

All actions noted from the October Steerco had been followed up and feedback compiled by the time the Steerco met in November 2011 to review the consolidated feedback on action items.

[Des noted [responses on] each action item. He then took the Steerco through the recommended solution. The Steerco, especially Nelson, was happy with the way that the suggested actions were handled. With this he confirmed his happiness for the coalition to go ahead with consultation with the industry. [...].The consultation with the industry would now include the recommended solution and proposed policy changes]. (58:26, 7-12)

Reflecting on the process, Des made the following field notes:

[The Steerco session was a significant milestone. We now had all Steerco members on board - especially Nelson. Nelson appeared impressed in the manner with which specific actions had been dealt out. Each item was taken on its own and analysis conducted with a logical conclusion presented.

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I think that this robust approach in dealing with each issue presented, convinced Nelson that he was dealing with a group that had the capability of unpacking what the problems were, defining potential solutions and engaging with the industry in a manner that could lead to positive results. This was as a result of hard work during the year, detailed preparation for the Steerco meetings and a deep commitment to leave no stone unturned - to deal out whatever issues were thrown at us. We even demonstrated that we would [openly] consider each of the arguments to date put forth by the industry and to determine whether the argument was a valid argument against the principles that were guiding them]. (58:27, 14-18).

At a cocktail reception that evening, Nelson congratulated Tom and his team for the first time in an open forum. He thanked them for their tremendous support and assistance over the year. He even indicated that there were key projects of high industry impact that Tom and his team were helping with. He believed that the initiative would not have reached this point without the assistance of this team *(58:27, 14-18)*.

Des drafted a position paper during early December 2011, which he shared with Joe, who still felt that much more consultation was required before any position could be put out to the industry.

6.3.6.   4th Steerco – setting tactics for approaching others - Feb 2012

Steerco met again to finalise the proposed document and in preparation of an industry face-to-face consultation session during the 1st quarter of 2012. A number of key decisions were made during the session, but these related to detailed features of Service C, with only a few suggestions about the document. Much time was spent considering how the industry should be approached: should engagements be face-to-face? How would disruptors be managed? A decision was taken to split the meeting into two separate sessions: one for ThinkCo and one for DemAlliance. There was also discussion on whether – and how far in advance – to circulate the document; it was felt that the meeting should provide context before the document was read in detail.

By the time of the first industry session, there had been notable movement away from stability. Views had been challenged and debated.

These engagements fostered growth in the change coalition and apparently brought on board a number of doubters, as parties prepared for industry engagement. Following this, the first industry session can be seen as marking the end of the disequilibrium stage, where a significant shift from the status quo was amplified.

6.3.7. Confirming movement away from status quo – 1st industry session – Mar 2012

The day of the industry session finally arrived. The first session was with ThinkCo members only. Nelson opened the session and positioned how he'd like the session to unfold: based on a consultative and collaborative approach he urged constructive conversation and open-mindedness and promised there would be subsequent time for participants to give considered responses.

> [Joe ran through the presentation and there were no questions raised during the presentation. Des's sense was that everyone listened with great care and there was an air of expectation as Joe got to the suggested proposed solution. Des anticipated that there would have been much more debate and questions especially when the problem statement was put up. Nobody challenged any of the points. Even when the principles were covered – nobody raised any objections to the principles tabled. It almost seemed like – well, well - we know this from years back – so move on with it – get to the crux of the matter. Joe ended at the suggested solution. He then opened up the floor for questions]. (73:32, 5-6)

Only a few of the questions asked turned the heat up. One actor asked whether the change would penalise recipients of Service A: a service that was already working. He also queried how promoting Service B would affect the work of some ThinkCo members who could grant access to services. Nelson pointed out that consultation was on-going and that new technology might give the promotion of Service B wholly different features. Another actor queried how much effort implementation would entail and certain details of the proposal, and was clearly not fully satisfied with Tom's response that details still required working out. However, there were no major disagreements.

The session ended with Joe providing the way forward. Nelson also indicated to participants that for transparency, there was to be a meeting the next day with DemAlliance and its constituents.

Reflecting on the session, Des wrote the following.

[The meeting was more tense than I had anticipated. Many participants battled to handle thinking about Service B beyond what was offered today or to think of Service A differently from the current solution. What ran through my mind was that we needed to call Service A and B by a different name - to get people away from the stigma attached to the terms. What was disappointing for me was that senior members were not able to shift their thinking to the systems level and reflect on what the holistic issues were. Many of the questions were clarifying questions at the operational level. Nevertheless, the session went relatively well and provided the platform for further engagement.

[At lunch] the conversation revolved around how to get parties to think from a bigger picture and holistic perspective. The Steerco discussed how none of the questions raised actually challenged the fundamental principles that guided their proposals. Observing this "togetherness" of the Steerco gave me a personal comfort of handling what I expected to be a much tougher session the next day as compared with the ThinkCo session.
Personally, I was satisfied that the engagement process was underway and the journey had begun]. (75:35, 18-20)

Strangely, the session with DemAlliance was much less tense than with ThinkCo members and was almost a non-event. Even fewer questions were asked as compared to the ThinkCo session.

[The only tense moment was when one participant implied that pricing may be an element that drives behaviour away from people using Service A to Service B and this may impact competitiveness.
Tom responded immediately by cautioning that there was no need to create fear for parties, as this was simply not true. He explained the difference between Service A and B and encouraged participants to think out of the box]. (74:8, 5-6)

ThinkCo and RegCo were both pleased that these engagements had finally occurred and that various parties and constituencies had some idea of their thoughts on how services to the citizens must change through a shift in policy. In an email to Joe, Des captured his thoughts on how the session went and prompted next steps.

Well done for last week. The journey begins. (78:4, 3-9)

However, the apparent broad agreement around the new proposals inevitably fed increasing tension, as it made clear and visible that there was to be a shift from the status quo. Thus ended the disequilibrium phase, and saw the organisational change process shift towards amplifying actions.

6.4. Tension and Threshold: Phase two

These new ideas about service provision placed demands on the organisational system to change. As new approaches and ideas emerged and were discussed and tested, tension and stress mounted until a threshold was reached beyond which change became inevitable. At that point, it took only one further development to push the organisation to change. With growing mistrust and perceived pre-adopted positions, intensifying conflict led to a threshold event. The narrative below describes the events (from May 2012 to March 2013) that led to the tension and threshold condition.

Figure 6.4.   14 Events Leading to Threshold Event
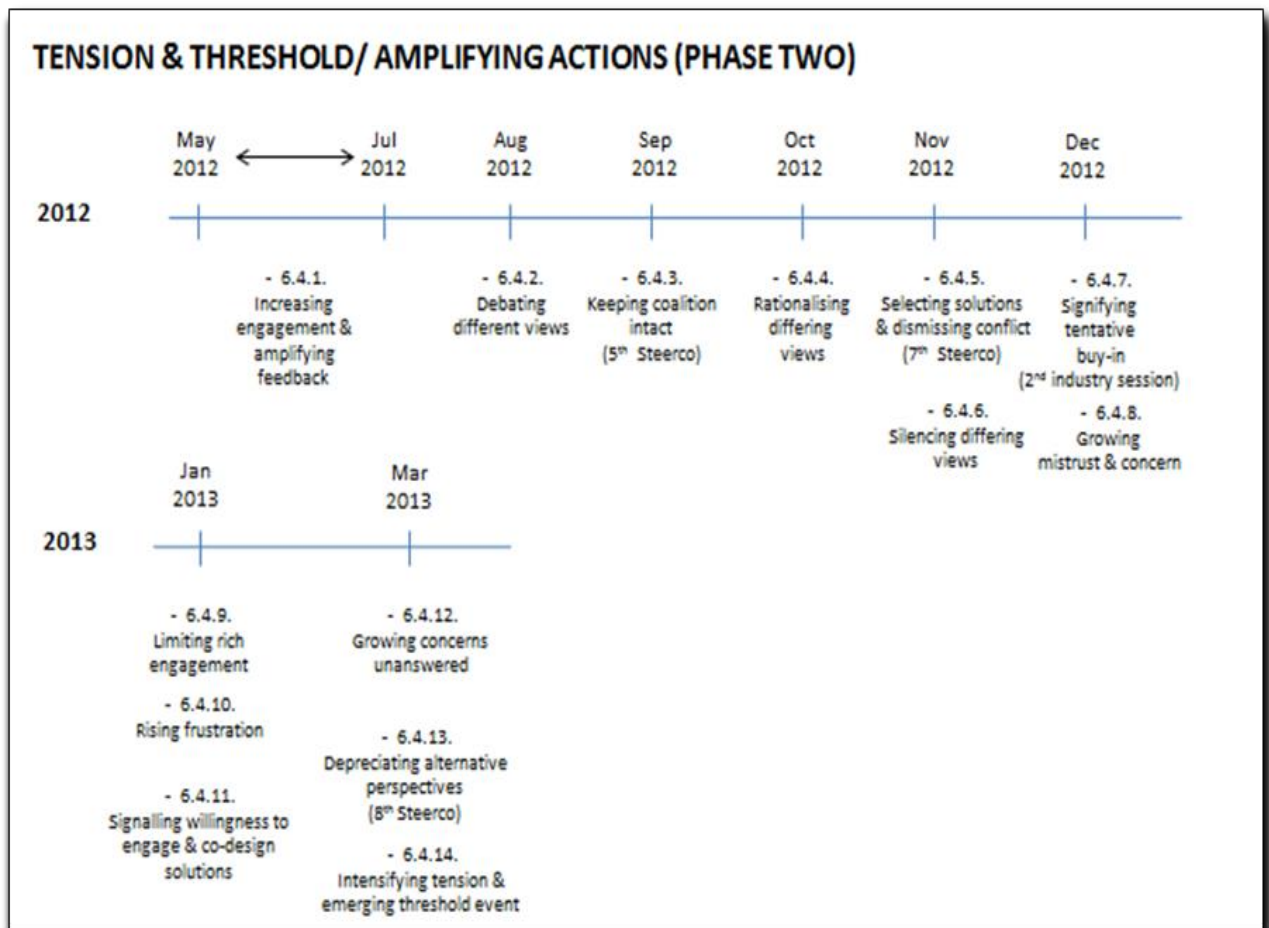
6.4.1. Increasing engagement & amplifying feedback - May 2012 - Jul 2012

Directly after the session with ThinkCo, Des was approached by a visibly upset ThinkCo member.

> *[The member indicated that this suggested proposal was not at all ok. Her main contention was that this could be seen as unconstitutional and that they would go the full length of the law to see that this does not happen. They would even be willing to take this up with the Constitutional Court]. (75:6, 3-6)*

The ThinkCo member was not the only concerned party. Two party members from DemAlliance needed clarification on what a Service C might look like *(80:9, 2-4)* and even after receiving this, feared the extent of the disruption entailed and argued for the retention of Service A:

> *[…although it was a positive meeting, Des's feeling was that based on current arrangements and models, different parties in the current system were going to find this too revolutionary and push back strongly]. (80:10, 9-11)*

Joe shared Des's fears *(81:5, 5-9)* about this reaction, and as further responses came in from constituents, it became clear that these fears were not unjustified, as Table 6.7 illustrates.

Table 6.7.   *Summary of Industry Support For Proposed Service C*

Responses from	Number of responses	Responses
ThinkCo and associated members	9	7 apprehensive 1 positive
DemAlliance members	11	10 apprehensive 1 positive
Total number of responses	20	

In general, DemAlliance members felt the new policy would disadvantage their citizens and compromise the principles espoused by RegCo *(129:13, 8-9)*; *(129:14, 17-17)*:

> *The proposed changes may inadvertently support the existing equality challenges and create an ideal environment for unconstitutional behaviour. (94:14, 541-683)*

Helena joined the debate, adding that:

> *Although one appreciates the need to consider the bigger picture, the real danger exists that in this approach, the finer nuances and specific needs of our membership gets lost. (96:27, 169-169)*

> *ThinkCo find themselves in a position where they have to, compete with other parties […]. It is therefore tempting to confuse matters by not being absolutely clear as to what we wish to fix. (96:29, 181-181)*

She added that trust and transparency were in danger of getting lost *(96:30, 187-187); (96:31, 189-189)* and that Service C gave ThinkCo members

> *a tool which gives them an unfair advantage over other parties. (96:12, 199-199)*

> *However, we are convinced that under the auspices of RegCo and ThinkCo through debate and engagement, new generation solutions and approaches can be developed without prejudicing different parties. (96:36, 231-231)*

This was stated even more bluntly by another DemAlliance actor:

> *The Discussion Document describes a "one-sided" position. (99:5, 2227-2235)*

> *The recommendations in the Discussion Document are perceived to be made in an attempt to legitimise ThinkCo members various wrong-doings. (99:7, 2429-2560)*

> *The recommendations made have negative and severe direct consequences for all citizens and parties which include ThinkCo members. (99:53, 4-162).*

> *Other definitions quoted are open for debate and it seems as if the authors of the document designed the definitions to suit the outcome of the proposals submitted. (99:12, 1058-1222)*

> *We disagree with the proposals made in totality. (99:56, 2402-2455); (99:57, 205-252)*

The actor advocated "a simpler solution" *(99:58, 1153-1313)* as did many others *(129:16, 97-97)*. Others urged the maintenance of the status quo *(129:18, 168-168)* or agreed that the proposal would unfairly advantage ThinkCo members *(129:17, 115-115)*.

Even ThinkCo members themselves had reservations about the proposals, positions and policy recommendations and urged caution. *(101:32, 541-684); (101:33, 889-1054)*

> *It seems clear from some of the findings and conclusions that the members of the Steerco do not have a full understanding of some of the fundamental elements […] which, if these had been taken into account, may have had a material influence on the outcomes of this review.(101:3, 1059-1397)*

The issue of a non-level playing field was a major concern *(129:19, 180-182); (129:20, 194-194)*, while several respondents doubted that adequate evidence existed to support the proposal *(107:23, 1183-1185)*.

Des saw this flurry of complaints as a "storm in a teacup" arising from parties' inadequate grasp of what had been presented and their reluctance to break away from the current environment and conceptual framework. He noted:

> *[The language of the current services and its functionalities (constraints) has contributed to the misunderstanding of what is suggested as a future landscape.*
> *What we don't want is to create preference but a fair environment to ALL citizens and parties on an equal footing. However although equal opportunity is the goal - preference is given based on espoused principles and policy objectives. The future landscape must align with the sound principles that are well established without barring or preferring any particular party. In fairness to all respondents – without detail, it's easy to revert to current understanding of services]. (129:21, 230-240)*

He had not, however, yet investigated whether Joe agreed.

6.4.2. Debating different views - Aug 2012

Joe compiled a formal analysis and response to these industry comments, shared it with Des and helped set up a meeting to discuss the document and determine the way forward.

Des captured his thoughts from the session.

> *[Joe ran through the document. The main conversation points revolved around:*
> - *How well the document captured and structured the feedback from different parties. I sincerely complemented Joe on an excellent construction of the issues.*
> - *The concern of ensuring level and fair playing fields.*
> - *The concern on the weaknesses of current solutions such as Service A and B. Their inflexibility and access issues to services were raised.*
>
> *Joe talked through short, medium and long term considerations. It appeared that the main take-out for Joe and his team was that the focal issue was a citizen consent related problem. For all of the short, medium and long term solutions - emphasis was placed on obtaining citizen's consent. I did not agree with this and considered how to broach the topic]. (132:25, 3-35)*

Joe had proposed in his document a new option (Service D) which attempted to provide a solution to all of these doubts and questions and thus "satisfice" the broadest range of options:

> *[Joe motivated that with Service D only legitimate and registered parties would be able to load and amend citizen consent data. Joe eventually asked if Des would support the suggestions to the Steerco.*
> *Des indicated that there were a few points that he needed to think through carefully first and test with Tom before committing to support.*

Des noted that some of the matters that concerned him were:
- *That the proposal does not incorporate Service C.*
- *That proposal contravenes the espoused principles].(132:25, 3-35)*

Des took a decision not to challenge the idea immediately, although he realised it indicated Joe was not as sanguine as he was about the volume of unconvinced responses, and that his unease and consequent new suggestion was in fact amplifying the tension *(133:13, 3-14)*:

> *[Driving back Des sensed how uncomfortable he was with the recommendations made. What bugged him the most was that for all of the short, medium and long term ideas – citizen's consent appeared to be the sole focus. No consideration was given to the other issues, in order to create level playing fields.*
> *It appeared that the feedback from different parties and constituencies - and lack of support for what was suggested from a policy perspective drove Joe to reconsider what the ideal solution would be. Joe strongly supported Service D]. (132:25, 3-35)*

Des felt he needed to discuss matters with Tom. Tom immediately confirmed that he did not support a Service D option.

> *Tom: If this is the route we're going, I'd rather not be a part of this process. I know how cumbersome and long the process is for the entire industry to adopt a particular solution. (133:13, 3-14)*

Des told Tom he would compile a document for Steerco dealing with the problems with Service D as opposed to Service C *(133:13, 3-14).* He emerged from his meeting with Tom convinced that one had to review the feedback from the industry with a pinch of salt.

6.4.3. 5th Steerco - keeping the coalition intact – Sept 2012

Tom was not able to join the 5th Steerco. Des knew that he had to think carefully how to explain why they did not support a Service D, as proposed by Joe. He felt the appropriate tactic would be to once more return to "what the problem really was", and

> *[…draw a comparative table (as Tom and Des had compiled) showing the policy options (from the as is, to the short term to the medium term and then to the potential long term Vision). This would be a subtle way to raise the level of conversation to the policy level rather than dabble in the details of citizen consents. It would also show where this particular Service D fit in and explain why it does not encompass the overall picture [problem statement]. Des's intent was to quickly draw the comparative table and get the policy makers to understand at the highest level what trade-offs were being made.*

[During the session] Joe noted that Des had a different view at this stage and asked if he would share this with the Steerco. Des asked if the Steerco could bear with him for a few minutes while he drew a comparative table. The suggestion was welcomed and Des explained that we should be careful of solving the wrong problem precisely. If we define the issue as citizen consent related issue, all we would be resolving is a consent related problem.

Nelson and Jack bought the argument and Des sensed that they understood well the different policy implications as described in the table. There was comfortability that Service C should be preferred from a policy perspective and that this preference should be emphasised.The meeting ended positively with the Steerco agreeing that they set up 2 sessions with the industry. Des agreed to come back to the Steerco with a proposed document and presentation]. (134:15, 4-17)

The engagement left Des feeling positive and that the Steerco maintained a principle driven argument and was not fazed by the lack of support and misunderstanding by many of the parties and constituencies.

6.4.4. Rationalising differing views - Oct 2012

Des informed Tom of the outcome of the session and requested permission to produce a document *(135:3, 3-11).*The document contained some broad guiding considerations for the Steerco, detailed clarification on the difference between Service C and Service D, recapturing of the fundamental principles, review of the policy options and concerns on why Service D on its own would not meet the policy objectives and principles *(138:3, 10-18)* and Des circulated it to Tom and Oliver for input.

However, Tom was uncomfortable with some aspects of the document *(140-5, 14-18)* and requested a meeting, captured in the following field notes.

[Tom was uncomfortable that Des left out Service D as an option in the medium term. Des motivated that there were 2 main reasons:
- *That their preferred end state was Service C.*

- *That he would prefer different parties and constituencies not to have rework.*

Tom indicated that he was uncomfortable as his view was that getting to the Service C end state was a distance away. They had to provide for an interim stage where parties could get the benefit of enhancing Service A and getting priority for this.

Des maintained that if one were to develop for Service A – why would you not leap frog and go for the superior [Service C] choice. Tom appeared annoyed and insisted that they keep a Service D option available and if one wanted to leapfrog that would be by choice.

Des battled to understand the rationale and thought there must be a hidden motivation. Des prompted Tom to provide an example of who may utilise an enhanced Service A. Tom indicated that [a ThinkCo member] could be a good example and one actor had already [notified] him that they were already in the motion of moving to Service A.

Des thought it best that the Steerco argue this position and come to a conclusion on it. For him, the double development did not make sense. He opted not to debate this any further and agreed that he'd include this in the document and submit a new version to the Steerco.

It was interesting [for Des] to note how their conversation felt more like an authoritative – let me tell you how it's going to be conversation rather than a mutually agreed position after some careful debate. Des realised that there was no need to create additional discomfort and rather [seek influence from] the larger team to address this. If the team's argument was sound he would support whatever decision they would go with]. (139:10, 3-13)

The amended document with Tom's input was submitted to the Steerco, which did not subsequently add or change anything.

6.4.5. 7th Steerco – Selecting solutions & dismissing conflict – Nov 2012

The 7th Steerco was well attended and much of the discussion revolved around the solution roadmap. There was acknowledgement, based on the feedback from different parties and constituencies that the current services had inherent deficiencies and quick alternative solutions were not the answer *(149:220, 15-16).*

After discussion, the Steerco reached agreement on the short term position. Potential pushback by different parties was debated *(149:222, 28-31); (149:223, 31-31); (149:224, 32-34).*It became clear that Joe remained concerned about the perceptions of unhappy parties.

> *Joe: okay, let's just look at it from the other side. I think the kickback is going to come from all these people [who will say] we have not been listening to anything that they have been trying to get through to us […]. We're just accommodating ThinkCo members. Now how are we going to [respond] to that? (149:225, 44-50); (149:226, 53-55); (149:227, 60-62); (149:228, 63-76)*

After much debate, agreement was reached on the roadmap and solutions ahead. Joe prompted when the issue of citizens' consent would be addressed.

> *Joe: in the meantime then we have to start a process that starts getting what is bedded down in terms of the consent and the standardisation of the consent process […].*
>
> *Tom: I think that's why we wanted to include Service C or D - it is all about consent management. So, whether we go Service C or D we will address the issue, but with Service C we will cover the consent issue and other issues.*
>
> *Joe: whichever methodology we use we have to sell this to the industry […] before we can actually move to the next step.*
>
> *Gwen: I think we are addressing [your concerns] in the end state Joe, [we are] not sorting this out in [any of] the short-term solutions.*
>
> *Tom: if we only had the short term and stop there [your concern would be valid] and we wouldn't have achieved our [end] goal.*
>
> *Jack: we would have tried to level the playing field in terms of preference, but now let's agree on the move […] is Service C not our desire? Do we need Service D? (149:229, 83-89)*

After some discussion it was agreed that Service C would be the option to go for *(149:81, 97-97)*.

Other key decisions were also made during this session, as noted by Des in his notes:

- *[The Steerco had agreed that Service C (preferred by Tom and I) was what we were pushing for.*
- *We had agreed that Service D (preferred by Joe) was not the ultimate goal.*
- *We had also agreed on interim solutions for example inclusion of Service B with Service A.*
- *We agreed on the way forward for engagement at 3 December session with the industry.*
- *It also appeared that we were beginning to apply our minds to what the next steps would be for example the crafting and changing of legal frameworks.*
- *What was also good was that we were beginning to pick dates for when these things would happen for example targeted milestones by May 2013].(149:230, 286-293)*

6.4.6. Silencing differing views - Nov 2012

Even though it appeared that all Steerco members were on board, two events demonstrated that tensions continued to build. As Joe, Des and Tom were going down the lift:

[Joe raised a few thoughts. He was still in the movie of having a Service D option only. Des could see Tom's irritation as they travelled down. Tom made a few comments to reiterate that Service D would still not meet the espoused principles. Des got the sense at one point that Tom was not willing to argue with Joe any longer. When they got to the car and Joe was no longer around, Des asked Tom for his thoughts.

Tom indicated that he was not worried about Joe and his fixation with the Service D. He felt the meeting was extremely positive and that they were all on the same page, except for Joe]. (149:231, 296-298)

Steerco members agreed to meet one final time before the industry session, but only Tom, Des and Joe were available. Again, it became clear that Joe still preferred Service D as a solution.

[Joe initiated the discussion by describing an amended presentation. He described what in [Tom and Des's] view - was still Service D.

Tom immediately questioned that this was not what they had agreed at the last Steerco.

Joe was visibly tense. He tried to clarify the difference between the two solutions […]. Des prompted Joe to attempt to get to a deeper understanding of why he was fixated on Service D. Des asked Joe why he thought it would be a superior option. Joe then responded that the motivation was not just that of access to citizen data. He strongly believed that this solution would be far more efficient for the system as a whole and would require significantly less development. Tom also reiterated that they can't unanimously change what was already agreed at the Steerco. The rationale that they went through at the Steerco was quite clear. Tom asked Joe directly to change the presentation to reflect what was agreed jointly.

After some further debate with Joe he agreed that what would be presented would be Service C.] (153:22, 4-15).

Ultimately Joe amended the presentation and Joe and Des prepared for the second face-to-face session with all parties. Once again the sessions were split: one for ThinkCo members one for DemAlliance.

6.4.7. Second industry session – signifying tentative buy-in – Dec 2012

Both the industry sessions were well attended by ThinkCo and DemAlliance members. Jack opened the session and positioned expectations *(154:174, 2-4).* He indicated that the purpose of the session was not to finalise decisions but rather obtain initial reactions *(154:175, 4-4).*

Joe presented the background and the roles of the various parties, stressing the impartiality of RegCo and ThinkCo as policy makers *(154:7, 8-8).* In a key moment, he acknowledged the issues raised by various parties:

> *Joe: All right, although there was support for the espoused principles […] but with this approach it's not practical or feasible. Any policy push towards favouring solutions and services that rigidly adhere to the principles may disadvantage some parties. That is the information that has been coming back. Therefore based on what we've heard, we've listened to the folks and in consultation revealed that the previous proposals as suggested [will not work]. We accept that, we've got a lot more information and we understand the issue a lot better. So, when looking at this input, we started looking to see what are the principles that were supported? First of all - open fair and transparent and equal participation for all parties and constituencies must and should remain a primary objective. […] So this is information coming back - people saying -- we want this to be fair. [There is] strong support for the principle of non-preferential services […] right across the whole spectrum. (154:178, 24-25)*

> *So our conclusions - due to the known deficiencies of Service B, they have not been preferred in practice. The current equal treatment of some services and a lower priority of Service B continue to influence practice in a negative way.*
> *There is no incentive to innovate. In addition, from the input received our conclusions are [that] if the deficiencies are viably addressed then the promotion of these services may be supported by the parties at large. (154:179, 28-28)*

Joe then explained what they had in mind in terms of a proposed solution. To their surprise, the response was relatively positive and the tone open and cordial. *(154:180, 57-57).* There were suggestions of mobilising and joint effort to take this forward.

> *Actor: The collective brainpower on this will be better than any individual process. (154:182, 70-72)*

Another party member supported that this was different but detail must be unpacked.

> *Actor: It's not taking what we got and massaging it, we are moving ahead. But the devil is in the detail. We need the standards. (154:183, 73-73)*

Some constituencies saw the potential of Service C but wanted even more, *(154:184, 83-84); (154:103, 90-90),* while others wanted to understand how mobilisation to work on a solution would occur *(154:185, 96-96); (154:186, 97-97).*

Jack summarised that he was getting a positive response from this engagement, although there were finer details to agree on.

Jack: if we said that Service C is something that will do good for the community and the industry, we should agree in terms of how we move forward. We are getting a very good initial reaction here to say maybe we are delaying too much [...]. But I think from our side what we would like to take out that the concept is the right one. (154:124, 115-115)

This was a rich and positive engagement, but there were also tense moments, particularly when citizen consent was raised. Some participants were uneasy about the extent to which they had been presented with a *fait accompli*, although Jack stressed the process remained consultative *(154:187, 118-126)*.

Ultimately there was agreement that the best way forward was to come together collectively and unpack some of the detail.

Jack: So rather than individual input maybe a workshop that can give a collective view would work for us. (154:188, 131-134)
Jack: Should we rather close it at this point. My takeaway is that the preference is all parties to come together towards the end of January to workshop any issues that are relating to this and Tom will probably facilitate that for us. […] the individual participant's views should still be welcomed and then we will take everything and work it into the proposal […]. So I think I'm taking away some action points that are encouraging and at least the concept doesn't make you want to fall off your chair. (154:189, 180-180)

The meeting ended on a high with the Steerco members believing that we had obtained some consensus.

A session was held later the same day with DemAlliance members. Once again Jack opened the session and positioned expectations, stressing openness and consultation *(155:132, 2-2); (155:6, 3-3),* followed by Joe's positioning of options*,* which stressed the same approach. Once again, the general feedback was positive. *(155:133, 41-41); (155:134, 41-42); (155:135, 44-44); (155-137, 56-56); (155:138, 83-83).*The main concerns were about the sincerity of buy-in from ThinkCo *(155:136, 54-55)* and, as in the morning, how the process could be taken forward in an open, democratic way *(155:94, 85-85); (155:139, 87-88)*. Helena added concerns about the soundness of the governance process for implementation *(155:100, 89-89).* The meeting ended positively with a sense that the Steerco had achieved some level of buy-in from both ThinkCo members and DemAlliance members.

6.4.8. Growing mistrust & concerns – Dec 2012

As agreed at the December industry session, Des communicated with the industry to mobilise the workshop session and requested nominees *(159:4, 3-5).* He received a call from one actor wanting to discuss the request:

> *Actor: I'm quite concerned about the content of the email and the governance proposed. Firstly, the request appears to be broader than just an industry discussion. The request calls specifically for participants to have a decision-making mandate. As you know we have been very supportive of the entire process. What I'm concerned about is that all the hard work gets undone by the industry workgroup. What we've enjoyed about the process to date is that we can provide our own individual opinions and influence the process. We do not need to be concerned that strong-minded vociferous individuals with their own agendas around the table who influence the process unduly. For this reason we would prefer to keep to the process and governance that has been followed to date i.e., we provide feedback directly in writing to the working committee. What do you think?*

Although Des indicated that the intention was not to weaken or deviate from earlier collaborative processes, but rather to allow participants to unpack and discuss detail, the actor remained unconvinced, suggesting that the workshop was "premature". She was unwilling to see her constituency's input "negatively influenced" by industry input. Des agreed to send out a second e-mail clarifying the mandate of the workshop *(160:24, 2-24),* which he did *(161:2, 2-8).*

In the interim, some DemAlliance members approached Des for clarity on some of the concepts, indicating that in dialogue with some ThinkCo members they were getting mixed messages:

> *After some deliberation with other parties we find that there are varying understandings (and misunderstandings) of the new proposed service. This in turn makes it extremely difficult for us to give meaningful feedback. (165:5, 26-30)*

Pat added arguments for greater transparency.

> *More than one member has also requested that to keep the process transparent the names are made public of those persons that formed part of the Steerco, the Working Committee as well as those party representatives that were interviewed by the two Committees. (165:6, 4-5)*

All these signals suggested that, despite general goodwill, some unwillingness to authentically engage with the industry persisted, as well as suspicions about the openness of consultation. The obstacles to open engagement were vividly demonstrated by what happened next, as these factors built up over the subsequent month, towards a critical threshold event.

6.4.9. Limiting rich engagement - Jan 2013

As calls for industry engagement to secure greater clarity increased, Des and Tom prepared for the industry session. To Des's surprise, Tom had a different view on how the session should be run.

> [Des recalled that what the industry was looking for was a joint discussion on issues and a better understanding of Service C. He was happy to run through this and felt comfortable that they would be able to handle any questions posed by the group.
> Tom was not on the same page. He believed that the decision was made at the session and they did not need to open up debate on the concept or any of the principles. Tom's view was that this session was really the starting process for unpacking the standards around Service C etc. Des's gut reaction was a deep level of discomfort. Although they had somewhat of a positive meeting during the 3 December session, comments from some actors rung in his mind. "The devil's in the detail […]; we have to jointly workshop this to get to a better understanding [...]; you certainly have pulled a rabbit out of a hat and I want to complement you on this brave approach […]; would it not be valuable for us to sit around the table and unpack this […]; I hope this is not a done deal and we can collectively sit around and determine how this will work [...]"
>
> On reflection Des believed the industry was at the right place to really prime meaningful discussion on Service C. His view was that once actors get to jointly unpack the process, they would apply their minds and buy-in to the process and possibly even come up with better solutions. Shunting this into governance related process and indicating that their role was merely to set up structures for the future, he sensed would break down the process.
>
> By merely prompting that RegCo have already made their decision and this was about setting up the structure to unpack the standards, he suspected would receive backlash from participants. This was not what was agreed to at the 03 December session]. (166:24, 3-18)

Des broached the topic with Joe, who broadly agreed that it would be advantageous to re-discuss concepts and principles and allow the chance for robust engagement *(167:12, 4-9)*.

Des relayed this position to Tom, but Tom remained apprehensive that this approach could provoke "unnecessary, unhealthy debate and inertia" and that what should rather be sought in the framing of the session was rather "a mandate for execution". Des disagreed, but felt that Tom needed to be kept on board and so decided

> [to change the presentation and keep it process orientated. His suspicion was that the industry would pick up on this and question why they were approaching this in this manner]. (169:12, 2-12)

6.4.10. Rising frustration - Jan 2013

Des positioned the session carefully based on the offline discussions and expectations from Tom. He stressed that the session was "to review the proposed governance structure", not to "disrupt the RegCo process" or "obtain members positions on the proposals" *(171:180, 12-15).*

As Des has suspected, one participant, immediately expressed the suspicion that Service C had already been decided on and there would be no genuine process of review and redesign *(171:21, 26-26).* Joe underlined that Service C remained a proposal open to inputs *(171:181, 28-31)* although Des modified this by pointing out there could be modification but not radical redesign unless some aspect proved completely impracticable and inefficient *(171:182, 32-35).*

After that point, debate heated up, over the issues of whether efficiency should be more highly prioritised than citizen consent *(171:184, 49-50)* and whether and how existing services could be combined *(171:49, 52-52).*

However, Des attempted to keep the meeting on track around the agenda of governance related matters, with other issues left for questions at the end *(171:50, 53-53); (171-185, 64-64); (171:186, 64-64).*

This provoked unhappiness: the questions had to be answered at some point *(171:64, 69-69);* there remained significantly different views *(171-187, 74-77).* Eventually, a ThinkCo member stated forthrightly that his expectations from the session were not being met, immediately supported by several other voices.

> *ThinkCo member: My expectation of today was quite different - I must be honest. What I was expecting was to answer the clarification questions. I can promise you as I sit at this moment in time our submission is going to be [full of] questions. Because we don't understand what is encapsulated in the proposal. I like the concept. But with that there are so many questions around practically what it means. (171:188, 78-78); (171:189, 84-89)*

It became clear that what participants wanted was to engage openly on the concept rather than debate governance related matters. Des decided to halt his governance presentation to make time for a clarification discussion around Service C *(171:190, 90-92.)*

In the ensuing discussion, it became clear that while there was relief that the questions were finally on the table, many participants felt there was a "vast chasm" between agreed underlying principles and practicalities of making Service C work. Another actor said he almost had the sense of being "railroaded into this idea. I think let's step back from it - to be honest" *(171-191, 99-100).*

The discussion continued, to the point where time had almost run out, at which point Des and Joe suggested that the questions be recorded, and time allowed for answers to be developed by ThinkCo *(171:164, 176-176),* leading to a subsequent opportunity to engage in detail on the principles and proposal of Service C *(171:196, 181-186).*

Tom and Des had a brief post mortem on the session, during which Tom reiterated that he was content the session had initially focused on implementation issues rather than the detail of the proposal *(173:24, 2-3).*

Des saw things differently. He felt time had been wasted on governance when that had not been attendees' main concern:

> *[Des felt that there was opportunity lost in influencing members to develop a deeper understanding of the concepts and they should have created more opportunity for them to come together under the ThinkCo banner to try and get to a common industry position on this matter. Tom's approach and paradigm was very much one of a top down approach.*
>
> *The opportunity to influence the mindsets was lost. Des found this session valuable in the sense that his own assessment of what the industry [especially ThinkCo members] were crying out for was a platform to come together to get to a common understanding of the potential solution. In his view it appeared that Tom merely wanted ThinkCo to be involved after instruction from RegCo to get on with the implementation. Des felt strongly that their role was much more than this. Des thought ThinkCo could play a much more influencing role in aligning their members to the thinking that was occurring at a Steerco level. His sense from Joe's comments at the session was that RegCo would look for majority industry support for any concept – if not; they may not continue to support a particular direction. Consultation, collaboration and buy-in from the industry were how they handled previous issues and this modus operandi would not change. (173:25, 8-9)*

6.4.11. Signalling willingness to engage & co-design solutions – Jan 2013

DemAlliance also requested a similar session as ThinkCo members with Joe and Des. The session was well attended by DemAlliance members and although there was some call for greater transparency, there was also a perceived authenticity around sitting jointly and finding solutions on the basis of the commonly-agreed principles *(176:131, 15-15)*; *(176:132, 16-18)*.

This position was put most strongly by a DemAlliance member:

> *DemAlliance member: You can say, and you can open the cupboard and take the flamethrowers and the guns and the arsenal and you can start shooting. You can shoot everything down, you can raise various questions at length you can in your feedback raise so many questions that no one actually will be able to answer. What will Service C cost with the relation to what I am currently paying with regards to Service A? And the questions and all of that will just never end. And you will also look at it and say, listen, these concepts have been proposed, they are totally impractical. Or you can sit back and say listen guys, we've agreed on the principles [as guidelines]. (176:133, 31-31)*

> *So the point is that we support the guidelines and principles. […] don't shoot everything down. This is a conceptual design. However I read in that that we're in discussions and consultation. There's room for alternatives. (176:134, 32-33); (176:135, 34-34)*

Thus, although DemAlliance was aware of the perceptions of mistrust, they did not share these and were keen to sit around the table *(176:137, 36-36); (176:138, 37-37); (176:141, 48-48)*. They were aware that the proposal still posed practical problems *(176:53, 54-54)* and in this context were concerned that restrictive deadlines might make the timeframe for solutions too tight (*176:136, 35); (176:139, 43-44); (176:142, 52-52)*.

In his response, Des was appreciative of the positive attitude displayed by DemAlliance *(176:143, 70-72).* He felt that the demonstration of shared principles provided a basis for progress: "there is value in coming together as a collective, with the industry and trying to understand and unpack those big things that I think people around the table have raised." He undertook to take DemAlliance feedback back into the decision-making process "and I'm going to be brave in my personal opinion that this is a good suggestion to come together as an industry for these reasons and I think you've articulated those reasons." While urging caution about making the process too big, and ending up with "design by committee", Des undertook to ensure that the questions raised would be answered *(176:144, 77-81).*

Des finally captured how he thought this could be taken forward, by extending the timeframe to allow for further real engagement *(176:145, 84-84); (176:105, 93-93),* a suggestion Joe supported *(176:147, 90-90).*

Des and Joe understood and supported that more direct face-to-face engagement was what was being requested. There was explicit commitment to address the issues in a *bona fide* manner.

6.4.12. Growing concerns unanswered - Feb 2013

The second clarification session with ThinkCo members went ahead in early February. Joe chaired the session and Des presented the matters that had been raised at the previous session. The problem as defined by the working group was articulated, the principles guiding the proposed solution, Service C, were highlighted, and how it was envisioned was laid out and all the questions that were raised from the previous session were listed, with responses.

Des began by encouraging participants to keep an open mind and not derail proceedings before they had heard the complete presentation *(184:190, 6-8).*

After the presentation and a few clarifying questions on speed of implementation, the real concerns surfaced: freedom of choice for citizens accessing the service *(184:191, 289-291)*; the costs of implementation *(184:113, 294-294)*; securing buy-in *(184:192, 304-304);* the unresolved issue of preferential services; *(184:193, 310-310); (184:194, 312-313)*; the risks of inefficiency in processing *(184:195, 322-328)*. The cumulative weight of these concerns built. As tensions rose, and despite Des's assurances that the concerns were being heard, emotions came to the fore:

> *Actor: This is different from the current environment. So I keep hearing this - that we will deal with these things. My concern is that we're going to get a policy change and it doesn't matter what argument or concerns are being raised by the participants here. We will have a policy change and then we will sit around and debate this. And somewhere along the way when we uncover all the details then it's not worthwhile. I would rather that we unpack these things in detail come to agreement on all of these things. (184:196, 347-347)*

> *Another actor: You guys are arguing your own arguments in different ways. I'm almost under the impression that the comments are not being listened to. We all need to make this a success by listening to each other and taking each other seriously.*

In your mind this is a very simple process. I think it requires a massive effort in order to make this a success. We are putting the burden on the servicing infrastructure, et cetera. We are creating capacity requirements and all this multiple communications. What is the impact of those things? What are the future costs, efficiencies et cetera? I'm very concerned that we really glibly looking at this without unpacking some of the detail. (184:148, 351-351)

Tom: Can I just ask you to not be emotional. Just tone down. RegCo has taken a year to reach this point. To accuse RegCo of glibly looking over comments - I think you should be careful not to make emotional statements. The process that was followed is pretty robust. (184:197, 355-360)

Another actor: I am concerned that we are throwing the baby out with the bathwater. (184:198, 395-395)

Tom: I think the vision documents are very clear […] and these are international principles as well.

Actor: But in the real world there are huge practical implications.

Tom: For some reason it seems like some guys are arguing that we should go to Service D. That's what I'm hearing. No-one is going to stop you from going to Service D. Just based on pure principles we will give Service C preferential servicing over Service D. (184:199, 400-404)

The meeting was closed abruptly, with many questions still hanging in the air. Joe thanked people for their time and engagement.

6.4.13. Depreciating alternative perspectives - Feb 2013

After the sessions with ThinkCo and DemAlliance, Des and Joe convinced the Steerco members that a joint industry clarification session was essential. The Steerco agreed and met to discuss some of the feedback to date, focusing on how many parties could not see the big picture *(186:224, 9-9); (186:225, 10-12); (186:227, 13-3).* Des emphasised that it was inevitably going to be hard for parties to grasp what was in effect a complete paradigm shift *(186:226, 13-13),* while Tom lamented the lack of strategic and conceptual thinkers in the industry *(186:228, 14-18).*

Joe: what surprises us is the level of emotion in this and you can see they are - I don't want to mention names but there are people who are almost so passionate about their little way that it almost brings them to tears. (186:229, 19-20)

However Steerco also conceded that the interrelation of problems made the issue complex:

Tom: if we only had the one problem it would have been easier […] but we've got two fundamental issues. In fact if you fix [one problem] you make the [other] one worse.

Des: the other thing we see is that even the citizen complaints have been growing month on month. It's actually scary and now I think we're sitting with about 400,000 citizen complaints per month and a lot of the times the guys say don't worry just have a look at the service volume we process in total and then compare the ratio. But I think that's just a fallacy. You've got to look at it and say - what citizen base is being served and look at the number of complaints.

Joe: so if we just change […] all we'd be doing is […] making that even worse.

Jack: but Des you are saying [that parties] are saying we want to address […] or [...]. Why can't we address both? (186:230, 22-28)

After discussion, the Steerco remained firm that the majority of issues raised were operational issues or related to perceived unintended consequences. A number of alternative solutions were considered and the Steerco eventually settled for two options that they believed could work:

- a shift to Service C; or
- parties left free to select between Service C and D.

Whichever option was selected, Service C would be the preferential service. This was the position agreed for presentation at the joint industry clarification session.

6.4.14. Intensifying tension and emerging threshold event - Feb 2013

Preparing for the joint clarification session, Des worked on an approach for the session, shared in this email to Joe:

Preliminary thoughts
- *The guys love to get into the detail.*
- *Somehow we have to prevent this (not for the sake of avoiding operationalisation questions) but to respectfully help focus the level of conversation.*
- *The level of conversation should be at the strategic and policy making level.*
- *We also have to demonstrate that we have "truly heard" their concerns.*
- *This does not mean that we agree with some of the arguments but the concerns have been well reviewed and internalised.*
- *What we'd like to do is present this in a format that demonstrates that the deep application of mind to this by participants – has been reflected on and genuinely considered.*
- *To do this we will follow the following format.*

Suggested format
- ***Policy options*** *(how have we come to this conclusion) – (So to start with the options right up front and then while they are reflecting on this, we will provide them with a view on how and why we've come to these options). So a demonstration of careful reviewing by the Steerco of problems, solutions and principles, keeping a long term picture in mind - that draw us to these conclusions.*
- ***Problem*** *(what problem/s are we addressing) – to clinically describe the problem.*
- ***Potential solutions*** *– (which ones resolve the problem over the long term).*
- ***Principles guiding policy decisions*** *– (here we will cover the key principle related questions)*
- ***Policy options once again*** *– to tie in the logic of how we arrived at this. If anyone disagrees they need to position their policy option rather than challenge the detailed processes.*
- ***Questions raised by participants*** *– (suggest only reviewing the core questions and highlight questions that would and should be tackled in the design phase).*

From the above we can then move to clarification from participants.

Hopefully this means a shorter presentation with no need to go into detail for example of Service C directly. It should hopefully also address preliminary thoughts above and focus the discussion in the "strategic block". (197:5, 7-28)

Des and Joe agreed on this format, with Joe chairing the session. Jack's opening remarks emphasised openness to "all burning issues" but with a focus on how these related to Service C *(199:303, 3-3).*

Des's own opening remarks attempted to set and open and engaging tone for the session.

Des: I'm really praying and hoping that this joint clarification session, that is probably a little bit overdue, is precisely that - that it's joint and hopefully we take you through a process where we clarify our position at the moment. I think it's quite fundamental that we don't miss each other and that's what Pat was saying this morning - and do you think that we will not miss each other; do you think we will be able to listen to each other and make sure that we are on the same page? So I think that's where I'd like to start.

If I am sitting in my helicopter and watching what's happening over one year or one and a half years. The first thing that I observe, the stuff that we are talking about right now is certainly complex[…] I now think our desire for the session is to try and unravel some of that complexity as we talk through this. (199:304, 8-8)

Des emphasised that it was an important topic politically and practically, and warranted robust engagement *(199:305, 8-9).*

He stressed that there were no hidden agendas but a real sense of urgency in addressing matters *(199:306, 11-11)*. He said the questions and concerns had not been considered superficially *(199:307, 11-12)*:

> *Des: Colleagues, the next three hours, this is the moment of truth. I believe that this session as we engage and as we talked throughout, we need to make sure that we're not missing each other. (199:309, 15-15)*

After this statement, there were many questions *(199:310, 22-26); (199:311, 27-27) (199:312, 33-33)*, but Gwen asked participants to hold these until after the presentation, as many of the answers might be covered in it *(199:313, 34-34)*.Des then spent some time unpacking what the Steerco saw as the fundamental problems and the reasons why action was needed *(199:314, 45-45)*. Some actors became impatient that the time for answering questions was being eroded *(199:315, 48-48); (199:316, 51-51)*, prompting Des to create a short interim discussion break *(199:317, 56-56)*.

However, many of the questions that arose exacerbated disagreements and introduced new points of conflict, especially around the volume of complaints current services were attracting *(199:318, 60-61); (199:319, 62-62); (199:320, 67-67); (199:321, 68-68) (199:322, 70-70); (199:323, 74-74)*.

> *Actor: So maybe we see the statistics of the high complaints as a mountain instead of a molehill. It's really the mountain that needs to be addressed. …. [Clapping]… (199:324, 75-75)*

Des explained why he thought a return to principles was necessary to cut this knot of conflict *(199:327, 95-95)*.

A debate around the understanding of the principles then started, and long-standing, underlying, conflicting interpretations finally surfaced.

> *Tom: Des let me tell that participant that he must be quite clear about the difference between […] and […]. (199:328, 114-114)*

> *You mustn't mix the two things up. The fact is that the service request when it comes is not lodged with the party […].And that's the difference isn't that true? These are universal concepts. These are not things that we've thought up. They are in the constitution. […]. It's just a clear definition. You mustn't confuse the matters. (199:139, 117-177)*

Pat: I think we must just understand that we will not finish this discussion today because there are flaws [in reasoning]. (199:329, 122-122)

Actor: I think there's a leg missing on the background around the definition of some key concepts. We are not talking about [...] or [...] (199:330, 123-123). [...] that needs to be specifically sensitised to the group because I think we might be talking at cross purposes as well. (199:331, 123-123)

Des: that's a good way of taking this forward otherwise we're going to get stuck in this discussion. It is quite fundamental [the clarity on concepts]. It is really! (199:332, 124-124)

Joe was uncomfortable and prompted that we move on.

Joe: I think we must move on [...]. (199:148, 125-125)

Participant: If we do [...] that solves the problem. No in very simple terms [...]. There are other problems I know. And you were embarking on all these more complex things and maybe we should step back and say what we need to achieve and [agree] the simplest way to achieve it. Because going back to the principles - is especially driven by efficiency as well and I think we've lost the word efficiency and concentrating on the nirvana out there.

Gwen: sorry I have to go out for a few moments but I want to stop you for the moment and just ask this audience to stop talking from your own perspectives and your own agenda. We are at a strategic level, we are looking at the strategic problem and we need to address it. We have been in discussions with the industry for more than two years and to try and look at this problem and I think it's now time for the industry to come together and lets as an industry implement something because as an industry we are not going to move forward. So I would just like to caution everybody to stop thinking about your own matters, and start thinking about the good of the industry, the good of the project and what you can live with. We're not going to make everybody comfortable and happy. And you know what my philosophy is. I'm not trying to make everyone happy and I'm very happy if everybody is equally unhappy. Thank you. (199:334, 126-127)

Pat: just quickly - what is the problem that we are trying to address?

Des: I'm hoping that's tongue-in-cheek Pat. I'll deal with it when we come back. I'll recap it when we come back. (199:335, 140-141)

Pat: Take Service C out [...] it's simple as that. (199:336, 149-149). And now we can truly say we are doing it for the citizens. So I'm sorry – I don't want to influence you too much. (199:337, 153-153)

Des: So how do we take it forward - what's the policy option?

Pat: The policy option is that we need definitions [of principles] to be redefined. (199:166, 153-154)

During the break Des and others discussed the direction and progress of the meeting. Jack, Gwen and Tom felt there were "continuous unnecessary debates" and that people were "playing games". They suggested the meeting be closed, after a swift exposition of the options to be considered. This was reinforced after Des's casual conversation with another participant during the break, who also expressed the need for stronger steering of the gathering *(199:338, 158-1630).*

When the session reconvened, Gwen described the revised order of business for the meeting and the working process going forward *(199:178, 167-167); (199:339, 180-180).* Des then positioned the two proposed options *(199:188, 179-179)*. The meeting was very dissatisfied:

> *Actor: I get the feeling that that I may as well go back and throw my response in the dustbin because the decision has been made and now we are being asked to respond to option […] and […] and nobody is concerned about the work that we as an industry have been working on for months. I'm not 100% sure if I am the only one in the room that gets that feeling but I'd just like some views from the panel on that. (199:340, 203-203)*

> *Lin: Chairman with all due respect we have a problem with this process. Maybe you should have said that at the beginning of the meeting already. That RegCo has already made the decision and just forcing it upon us and telling us […] because our comments are actually worthless. With all due respect and Gwen you said that you refer to how much you consulted with the industry. I represent […] and you have not consulted with any of us. There are many other parties in this room who say the same. So we are curious to understand how this consultation process works. So quite frankly we have a major problem that you're now telling us that the decision has now been made and we are sitting here for no reason. If your goal was, Gwen, respectfully to make sure we are all equally unhappy then you have achieved this goal. You said this morning and we all agreed how critical and how important this initiative is and what we do here in terms of the much bigger picture and the bigger economy of the country and now you're telling us how you're steamrolling this process. […] If the majority of the responses on the 28th tell you that we are not satisfied and we think there should be improvements - will you still forge ahead or is it actually a done deal? (199:342, 205-205)*

Jack attempted to justify the adequacy of the consultation process *(199:343, 207-207)* and the need for forward movement *(199:344, 207-207)*. The following two responses are typical of what ensued:

> *Lin: Respectfully sir, that's not consultation. That's information. You are just telling us and with all due respect sir, that exactly what we're doing this morning again. We've had very good responses from this floor this morning. […] But actually sir, what you telling us right now and you calling it a consultation but in actual fact you just telling us you forging ahead and respectfully I don't think this is in the interest of the whole. (199:345. 211-211)*

Actor: I support fully what Lin and others have said. We do not need to go through [detail] but this is not consultation. I'm a bit surprised that you have got to a decision but are also still waiting for input from all parties on the 28th. The very first point today on the purpose of the workshop was to provide clarity on Service C et cetera. There still are a lot of questions and uncertainty of how you see the Service C process and some of us came here with the expectation that this will be answered. (199:347, 214-214) [Also (199:349, 222-222); (199-350, 223-2); (199:351, 227-228)]

Counter-arguments and explanations from Joe *(199:351, 227-228),* and Gwen only seemed to inflame sentiments:

Pat: I'm sorry but I think I was very positive before we went out and now suddenly I'm down there somewhere. (199:352, 235-235) […] we thought we were on track until we broke for tea, and suddenly the mat was taken from underneath us.
So I would plead in my personal capacity if it all possible that rather instead of providing us with the rules of the game rather leave us with the policies that we want to achieve and say to us, guys, you know the environment; these are the problems that need to be addressed and you come back to us with a proposal. If we don't like it we always have the right to suggest other things or other changes in the end. (199:353, 235-236). I would plead that we don't break here on a sort of a break [no more engagement] basis but that we acknowledge that there is knowledge in the room and that we allow that knowledge to try and come up with a proposal. (199:354, 236-236)

After this point the meeting fragmented. While a few participants wanted to pursue particular points of argument, or return to the discussion of underlying principles, others wanted to speed towards a decision, mindful of the urgent political context in which the change discussion was taking place *(199: 348, 215-218); (199:357, 248)*. Yet others wanted to let the process unfold at a "natural" pace through more opportunities for face-to-face collective engagement *(199: 363, 263-265); (199:362, 260); (199: 364, 269-270)*, for either negative (fear of rushing towards a decision with unforeseen consequences *(199:261, 247)*) or positive (desire to build on the knowledge or previous work of the group *(199:359, 253); (199:361, 254)*) motives.

Jack urged that participants needed to "come up with an option Five" *(199: 365, 273)*, but the requests for more dates for engagement were not formalised by the time he closed the meeting. Des feared that no decision would mean collective engagement would not be actioned, but after trying to prompt such a decision and realising the request had no support, he dropped his request *(199:366, 274-277)*.

It was clear to actors from most quarters that this had not been a positive session. Some even referred to it as immature *(200:8, 17-23)*. Tom used even stronger language in a communication to Jack and others. He asserted once again that prior consultation had been more than adequate, the principles "universally accepted", the rules of procedure fair, and Service C a correct and logical outcome of all this.

> *My disappointment with the response of most (not all) of the audience stems from the fact that:*
> 1. *Most were focused on their immediate and short-term party self-interest, rather than at a policy/ strategic level.*
> 2. *Many did not understand basic concepts.*
> 3. *Many were unwilling to positively cooperate with the legitimate guidelines. (201:19, 16-39)*

In another letter to the Chairperson of Alliance3, Tom went further:
> 1. *The categorical accusation (on behalf of the DemAlliance representative) was that RegCo had NOT consulted sufficiently, and certainly not with Alliance3. In my view, this statement was and is patently untrue as the consultation and engagement process has been particularly thorough and robust and has now been underway for 18 months, with numerous opportunities to provide input. The fact that party delegates has either not provided input, or that the input has not been accepted, does not change this fact. Also, I challenge Alliance3 to give one example, from anywhere in our country or the world, where an authority has done more to consult that is the case in this process.*
> 2. *The tone of the accusation was even more of a concern; it was aggressive, provocative and disrespectful. I certainly would not have tolerated it had I been in the chair; I would have demanded an immediate apology or else sent the individual out. (202:10, 10-21)*

In this letter Tom stressed the political mandate RegCo had for its actions, and requested that the Chairperson, on the basis of their previous "cordial and constructive" relationship, "deal with it as you see fit."

This explosion of resentments and indignation was the critical threshold event for change. Tensions could only be dissipated with the emergence of something new that could get the system working again.

6.5. Emergence: Phase Three

Once the threshold event was reached, some coalition (Steerco) members were willing to reduce the pent-up tension by compromising on the suggested solutions. This resulted in some actors informally meeting to agree new solutions. New coalitions emerged supporting solutions that were seen as more viable and appropriate.

The narrative below describes the events (from March 2013 – June 2013) that led to self-organisation and the emergence of new structures (coalitions and solutions).

Figure 6.5.   3 Events Leading to Emergence

6.5.1. Mobilising & supporting alternative emerging solutions - Mar 2013

Following the joint clarification workshop, different parties submitted their written feedback to Des and Joe. Unsurprisingly, there was an overwhelming lack of support for Service C *(214:56, 6-6); (241:58, 22-22); (218:16, 21-21)*. Calls for a joint session *(228:1, 8-8); (228:3, 9-9),* fell on deaf ears, although in general terms there were continued calls for collective work on the problem *(215:22, 4-93); (227:22, 1-191).* Strongest support was for an enhancement of Service A, following the lead of Helena and Pat.

> *However, as constructive players we herein propose a slightly amended Service C (an enriched Service A). (216:10, 1282-1364)*

> *Alliance3 supports the road ahead as proposed by DemAlliance. (217:7, 135-194)*

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The proposed Service C, in its current design, has many inherent flaws and is not acceptable to Alliance4 members (219:7, 51-51). Alliance4 supports the submission by DemAlliance. (219:21, 124-124)

Alliance2 remains in support of innovation on improved citizen consent. (221:11, 43-43)

We specifically wish to emphasise that we are in support of enhancing Service A and sincerely hope that the DemAlliance proposal will meet your favourable consideration. (224:2, 480-679)

Neither were the majority of ThinkCo members in support of Service C *(227:21, 1925-2297); (225:31, 216-216); (215:21, 574-1041); (214:13, 20-20); (229:1, 20-20)*.

Some parties returned to reflections on what problem was being addressed *(219:20, 114-117); (214:59, 23-23)*, while others challenged that some of the underlying assumptions of the problem were not correct *(220:31, 149-149); (214:57, 9-9)*. Yet others raised concerns about the solution not aligning with principles *(214:8, 14-14); (214:60, 27-27)*.

It was clear from the grouping of these responses that much informal dialogue had been taking place, compromises that brought parties together were being made, and new alliances were slowly forming. A new order within the industry and its partners was beginning to emerge.

6.5.2. Compromising to obtain support - Apr 2013

After reviewing all the responses and reflecting on the feedback, Des was also having second thoughts about the effectiveness of Service C as the ultimate preferred solution. He began trying to devise a win-win solution where an enhanced Service A and Service C could co-exist – thus attracting the support of all parties. In written communication with Joe he wrote:

[I'm done with the analysis on my side. This has been most interesting!
I would like to catch you during the week for a discussion. My view is that we could possibly get to a WIN-WIN for all parties – (a Service W). The Steerco though may not be happy with the conclusion? Can't wait to share thoughts]. (236:2, 3-9)

Joe's analysis, based on the feedback, reverted to his initial suggested solution of a Service D. His main reasons for not supporting Solution C stemmed from the consensus of responses:

> [The general consensus was that the Service C service concept was extremely complex and would require a great deal of development, testing and education. ThinkCo members clearly indicated that the cost of developing and implementing the service would be high due to the complexity.While the service itself would bring about efficiencies, there is concern that the required supporting infrastructure would cancel any efficiency gained. It is in this context that a number of parties proposed enhancing the current service. The parties were cautious of the unintended consequences of the proposal and the perception of unfair practices if Service C is the preferred service]. (238:33, 254-276)

> [The current Service A must be enriched. (238:34, 306-306).The Working Group recommends that parties convert all Service B services to Service D]. (238:35, 314-314)

After reviewing Joe's analysis, Des compiled a document and matrix comparing the different proposed servicing options. The main espoused principles (including efficiency and effectiveness) and pros and cons of each service were compared. In the final analysis, Des argued that neither Service D nor the proposed Service C were effective solutions as options on their own.

> [There is strength in diverse views and ideas, which also again highlights the complexity of the topic. It is prudent that each option be considered and debated carefully to be able to constructively guide towards the most effective solution/option and respective policy implications]. (240:35, 4-4)

Des emphasised that decision-makers should be clear about the difference between the "efficiency" and the "effectiveness" of a solution: effectiveness was subjective and multi-faceted:

> The effectiveness of a solution (option) is a subjective quality assessment of whether the solution (option):
> - *Is the appropriate solution given the market needs/requirements, and thus*
> - *Reviews if the solution utilises a mechanism effective for the context within which the service is being processed*
> - *Limits unintended consequences*
> - *Is cumbersome or complex from a citizen usage perspective i.e. given the citizens in mind, how easy/convenient will it be for them to understand processes, respective services and related obligations. How much effort/education will be required to enable various services?*
> - *Requires significant development or does it leverage existing infrastructure?*
> - *To re-iterate, is the solution (option) "the right thing to do" given the various considerations). (240:36, 40-46)*

He concluded that a solution W (win-win) solution – allowing parties to choose between solutions – should be proposed. Des shared these thoughts with Tom and Oliver.

> [Oliver pointed out that Tom wasn't listening. His mind was made up.It didn't matter what Des was going to say, Tom felt that the fact of the matter was that Service C was the right service and should be preferred above everything else.
>
> Des reflected with Oliver on what the best approach would be to have one more round of debate. Des felt that whereas he fully supported the principles, on review of the different parties needs and the problem they were trying to solve for, the issue of the solution being fit for purpose becomes questionable […]; he felt that they were not truly listening to each other or creating the space for everyone to engage freely or openly.
> After chatting with Oliver, he decided to approach Tom with these concerns one more time. (246:6, 1-6)

Des approached Tom, conceding that from a principle standpoint Service C was the most closely aligned. However, he argued that the diversity of views from parties signalled the need for flexibility. Tom suggested a point-by-point comparison of services, which revealed "there are some processes that are required and neutral between both solutions", and thus many similarities between Services C and D, but that Service C required less effort in one aspect: service processing, making it superior overall.

> [They concluded the discussion by confirming that they were both on the same page and shared the same views. Des pointed out to Tom that this is the view that he would present to the Steerco in his absence and he'd confirm that they were on the same page. (249:9, 1-7)

Des described this emergence of a new perspective that shifted from contrasts between options to an understanding of what they shared as a "key moment".

At the next Steerco, Des responded to the proposal for Service D by pointing out that if the two solutions were compared side by side, Service C would be the more efficient. But after much discussion, the Steerco opted to go for Solution W.

> [The 2 processes were exactly the same for obtaining citizen consent. How can the one process then be considered more efficient and the other less?
>
> Jack agreed and acknowledged that the 2 processes were the same. He indicated that given that respondents were not in support of Service C, would it not make sense to compromise, seeing that both processes were so similar.

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That if we indicated that we could just put both services together, would we not get the industry to move and support this?

Gwen supported this view and asked if it would not be a WIN-WIN?

Des suggested that Tom and he still believed that Service C, as demonstrated was more efficient. (257:40, 50-53)

Des remained convinced that the points he made were not really understood or heard. His sense was that RegCo merely wanted to get to a position to get rid of this monkey on their backs]. (257:25, 60-60)

After the Steerco, Joe and Des reflected on the session. Des retained a nagging worry, which eventually crystallised into a realisation that in practical operational terms the two servicing methods were so different that they could not be treated similarly.

[This was a disappointing session for Des. He felt like they were truly not listening to each other and once again they ran out of time and were forcing decisions. The ability to stand back and critically assess comments and input from party respondents who were positioning solutions to their best interest was lacking. They were rushing to solutions to appease parties, because of the general lack of support rather than sticking to principles. They also did not reflect on how a large part of the industry simply adopted a position suggested by Pat and Helena i.e. they had mobilised to support one option. He was not convinced that many of the parties on unpacking what the option actually meant would support the option. Nevertheless they did not pick this up and merely reported that the majority did not support. He felt strongly that he had to be responsible and share his thoughts with Jack at least]. (257:41, 67-70)

Des's initial attempts to solicit Jack's influence were fruitless *(260:6, 64-75).* But the discussions led to a final Steerco, this time with Tom present.

6.5.3. Final Steerco – Shifting alliances – Apr2013 – Jun 2013

Joe called Des before the session, to alert him to the fact that there had been significant changes, resulting from several interim group and individual discussions from which Des and Tom had been excluded. The outcome of these was a major change: Service C was no longer supported. *(279:38, 8-9)*

Jack introduced the Steerco meeting, indicating that a speedy solution was sought *(281:153, 3-3)*. For this reason, a compromise acceptable to all parties would be favoured *(281:154, 4-4)*. He revealed that there had indeed been interim meetings *(281:155, 5-5).*

Jack introduced Joe, whose remarks strongly emphasised the unacceptability in industry responses of Service C *(281:156, 9-15)*. Jack's shift from his previous support for Service C was clear evidence that new coalitions and thinking were emerging.

Tom then intervened, noting the arguments did not hold: "nonsense…rubbish" *(281:157, 16-17)*. We've heard it all before." *(281:158, 20-22)*.

Joe pointed out that these opinions were a genuine outcome of their discussions with ThinkCo members. In line with Jack's argument that in order to achieve action; RegCo was willing to "settle for less than the Rolls Royce". Tom argued that the same pattern of responses always came from industry parties, irrespective of which initiative one was discussing.

> *Tom: I can give you five initiatives off-hand, just immediately- where on a principle level we absolutely have to do it and the resistance that we get from them. The fact is at an operational level they always want to do nothing. Whereas there's always cost pressures; there are always priority pressures. All of those arguments […] are self-interests. And I can give you that in detail. Every single initiative goes through the same thing. And ultimately you do the right thing. (281:159, 24-25)*

After Joe ran through all the feedback and the position of preferring Service D, Jack summed up by noting that the aim was to get all parties to buy-in and get momentum on this *(281:160, 81-81)*.

Tom then reiterated his concerns from the discussion *(281:161, 82-84)*; *(281:162, 88-88)* and provided six practical considerations. He also expressed his concern that RegCo's reputation might be at stake if principles were diluted for the sake of expediency *(281:81, 90, 90)*.

This seemingly convinced Jack. He conceded to Tom's request.

> *Jack: I think what I get from you Tom and colleagues please come in - you are concerned that we should not say don't go for Service C - but actually we are silent about it. Because this is what you said is doable in the short-term. So our message should be that we still support Service C and not say [explicitly] do Service D. Do what you think is doable. But if you do more - that's ok. (281:164, 129-132)*

This appeared to be a good compromise, close to was what was agreed at the previous Steerco and to Des's Solution W.

However, Des had since realised that Solution W was not practicable. He felt he must raise this *(281:165, 157-157)* – and his explanation that the compromise would not work brought the meeting back to stalemate *(281:166, 160-161).*

After some discussion it was agreed that the position would not be the "blended" Service W, but would include Services C and D jointly. ThinkCo would handle detailed discussions with the respective parties and Des and Joe would work together to get the mandate to ThinkCo finalised *(281:167, 172-172); (281:168, 186-187); (281:169, 194-195).*

Thus the final Steerco ended with some agreement on a way forward: drafting a mandate jointly that would be shared with all parties. Ironically, Solution W – not achievable in practice – had been the silver bullet. Discussing this new element had drawn out, brought together, and built on, those impulses that had emerged in an unpredictable way from the crisis.

6.6. Stabilising Feedback: Phase Four

The new ideas and alliances were still coloured by emotions and attitudes left over from the tensions and disagreements of the past. The organisation needed to find the boundaries that would keep it sustainable. Feedback between parties was needed to "talk out" these remnants, putting the brakes on the erratic emergence of new coalitions, loyalties and ideas.

The change process reached its final phase when some coalition members firmly rejected compromise. The older coalition broke up and these actors were not engaged in the drafting of agreements on the way forward. The change process stabilised as these agreed positions were mandated for adoption within the existing structures. The industry collectively supported the newly adopted solution. The narrative below describes the events (from August 2013 to November 2013) that led to stabilising feedback.

Figure 6.6.   2 Events Leading to Stabilising Feedback
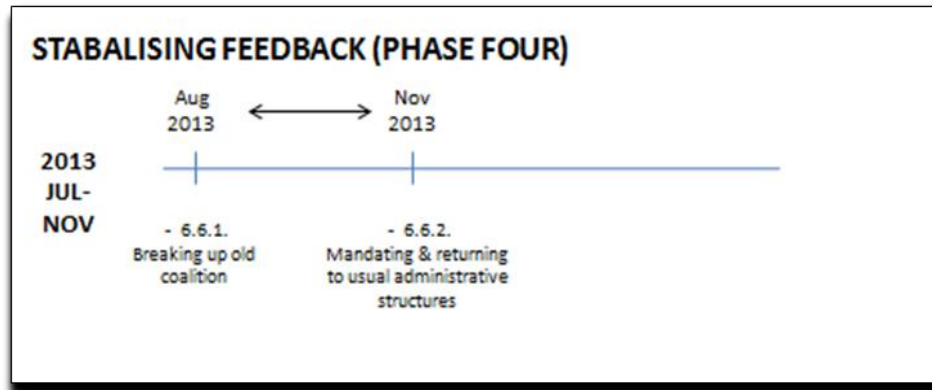
6.6.1. Breaking up old coalition - Jul 2013

Although the meeting had seemed to end on a positive note, RegCo went on to draft the mandate on their own and left ThinkCo out in the cold. Des captures what had played out in field notes.

> [Joe shared with Des that RegCo had thought that at the Steerco, Tom had gone too far. He had overstepped the boundaries. Des asked Joe what he thought were perceived as being disrespectful. No clear comments or examples were provided that indicated where the perceived disrespect came from. Des again prompted by asking what in particular was perceived to be disrespectful. Joe indicated that the comments that RegCo would be seen as weak and backing down from a position because the industry had bullied them into adopting a position was seen as being disrespectful.
> This was the main reason why Des sensed that ThinkCo were cut off from the process and why RegCo had gone ahead with independent engagement with various parties]. (283:14, 2-7)

6.6.2. Mandating and returning to usual administrative structures – Aug 2013 -Nov 2013

ThinkCo eventually were handed a copy of the mandate by RegCo. It was not aligned to what had been agreed at the last Steerco. Tom raises this in an email to Jack.

> [At the last Steerco, it was suggested that Des and Joe jointly look at slight amendments to the proposed mandate. As I mentioned during my one-on-one, this decision was not pursued by Joe after the meeting]. (286:23, 54-56)

> [From Des's perspective, he had almost taken for granted that the fight was over. From the conversation with Joe at the party, and from the last Steerco, it became apparent to

him that the decision had already been made outside the Steerco governance structure. Tom and Des were merely being informed of the decision (285:13, 10-11)

Jack requested that Tom respect the decision of RegCo.

[I hope as previously communicated, ThinkCo accepts RegCo's decision and will work with industry parties to implement provisions of the mandate]. (289:6, 72-72)

The position was communicated to all parties who received the news with elation – and a deep sigh of relief. A DemAlliance member commended the outcome.

[It is our view that the new proposal is very positive and commendable. This time round the Steerco are not prescribing the detail but are setting the broad guidelines within which services should function. (374:1, 5-6)

I want to confirm that our members declare themselves available to participate and to offer whatever expertise they may have to assist with this project [going forward]. (374:2, 9-9)

6.7. Conclusions

By situating the RegCo decision in the formal hierarchy of project structures and project implementation, the further emergence of "maverick" ideas and alliances was slowed, to permit the development and implementation of Service D and establishment of a new temporary level of order. Thus ended the drama.

With the unanimous support for Service D by all parties, Tom and Des found themselves isolated. There was no support for their proposal for a Service C, as one of various others including a Service D. While Steerco had initially strongly supported a principle-based approach which provided the basis for preferring Service C, the unwavering questions and doubts from all quarters (both DemAlliance and ThinkCo members) drew Joe and Jack away from their earlier alliance with Tom and Des. Finally, the coalition crumbled. DemAlliance and ThinkCo members – although usually politically on opposite sides – all ended up supporting a common solution in Service D: a new regime at the levels of both alliances and policy thus emerged.

7.   Formal Analysis

7.1.   Introduction

This Chapter builds on the narrative and progresses the analysis. The formal analysis rises above the surface data and attempts to move beyond description (the predominant form of analysis captured in Chapter 6) and into the realms of interpretation, explanation and prediction. The Chapter is structured around the main research question, namely - *how and why does organisation change happen?* As noted, the case is that of an instance of change at all levels of analysis and the aim is to gain an understanding of the processes of change using complexity theory and social cognitive theory as guiding frameworks.

The intent is to provide a deep and contextualised analysis of what goes on within and between the phases of change. The dynamism of, for example, how phase transitions occur, how and why coalitions/ social cliques (aggregates and meta-aggregates) form, grow, and collapse, how common understanding (correlation) and buy-in (principal support) develop, and how conflict and mistrust emerge are addressed.

7.2.   Causal loop diagramming and codeweaving

As noted, causal loop diagramming is used to map out how change emerges over time. This method is common in systems thinking and system dynamics (Senge, 1990, 2007; Sternman, 2000).

An iterative process was followed to identify linkages among categories and then return to the data and the analytic memos to confirm or disconfirm their existence. The resulting causal loop diagrams detail how micro-level processes and mechanisms (dynamic behaviours) of the actors over time create emergent change conditions, at the meso and macro level. This map facilitates a meso-level theory of change represented through bridging propositions that cut across multiple levels of analysis. As noted, to suggest causality between codes and categories identified in the data, the method of codeweaving is used (Saldanha, 2009).

7.3.   Mapping the emergence of change

To map the emergence of change and answer the main research question – *how and why does organisation change emerge* – using complexity theory and social cognitive theory as explanatory frameworks, each research sub-question is addressed.

The research sub-questions emerged and were refined through abduction – the simultaneous reflection on the narrative (Chapter 6), the analytic memos and theory (Babbie & Mouton, 2001; Van de Ven, 2007).

The research sub-questions are addressed in the following order, based on four phases of change (Lichtenstein & Plowman, 2009).

How and why does disequilibrium state (phase1) come about?
- How and why do aggregates (coalitions, cliques) form?
- How and why does correlation (common understanding) emerge?
- How does buy-in (principal support) emerge?
- How and why do meta-aggregates (larger coalitions) form?

How and why does tension and threshold (phase 2) emerge?
- How and why does conflict emerge?
- How does mistrust emerge?
- How does threshold event emerge?
- How and why does buy-in diminish?

How and why does emergence/self-organisation (phase 3) emerge?
- How and why does satisficing happen?
- How and why does entanglement occur?
- How does buy-in emerge? (an alternative explanation)
- How and why do other coalitions (meta-aggregates) form? (reviewed)

How and why does stabilising feedback (phase 4) emerge?
- How and why does disaggregation happen?
- How and why does stability come about?

7.4.   How and why does disequilibrium state (phase 1) come about?

The processes from the narrative (Chapter 6) helped identify the dynamics that occur during the disequilibrium phase. These include coalitions forming and strengthening and correlation (common understanding) and principal support (buy-in) developing. These dynamic processes ultimately result in a coalition persuading movement away from the status quo and emergence of disequilibrium conditions. How and why each of these dynamics occur is presented by referring to complexity, leadership and dissonance theory.

7.4.1.   How and why do aggregates (coalitions, alliances, cliques) form?

An underlying condition for how change comes about, in complexity theory, is that it occurs through agents interacting (dynamically – i.e., in a random manner and not necessarily formally) and forming aggregates. A better understanding of aggregation - how and why aggregates form is necessary to understanding the change process.

Relationships—rather than authority, superiority, or dominance—appear to be key in new theories of leadership (Drath, 2001). Yet, while relationships are at the heart of many of the new theories emerging in the leadership literature, for example, distributed (Gronn, 2002), distributive (Brown & Gioia, 2002), shared (Pearce & Conger, 2003), post-heroic (Fletcher, 2004), and complexity (Marion & Uhl-Bien, 2001), scholars know surprisingly little about how relationships form and develop in the workplace. Moreover, investigation into the relational dynamics of leadership as a process of organising has been severely overlooked in leadership research (Uhl-Bien, 2006).

To unpack the dynamic of how and why coalitions/alliances form, four causal loops with categories that emerged from the data are suggested. These are themed:
- *"Ants in my pants"*
- *"Friends, Romans, countrymen, lend me your ears…"*
- *"Two peas in a pod"*
- *"Love is blinding"*

These dynamics taken together form the dynamic, *"birds of a feather flock together"* and explain how and why aggregates form.

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7.4.1.1. "Ants in my pants" - R1

Helena and DemAlliance were deeply frustrated by having agreed service levels, important to their constituencies, not met. They were also annoyed that it appeared that ThinkCo members were playing foul and attempting to sabotage the services. Further, although raising the issues many times, the matters appear to fall on deaf ears.

> *What is not reflected in the statistics published by ThinkCo is the actual performance of the service versus the agreed and contractual time periods as reflected in the SLA's. (1:26, 4:202)*

> *The availability of Service A feedback data in time for these parties [...] had been an undertaking from inception, however currently and frequently not met in practice. (1:10, 1485:1691)*

Similarly Tom perceived a problem with the current services. In contrast to Helena though, Tom was not concerned with the operational functioning of the services but rather the disparity he perceived between services and fairness of availability of the services to all parties.

> *However, Service B was unfortunately not specifically included in the policy at the time, which we believe was more an oversight, rather than by design. (2:3, 13-13)*

The map begins by first capturing this *perceived discrepancy* as a node. This *perceived discrepancy* isn't just an arbitrary belief. It is a belief with an associated sentiment (i.e., coupled with strong affect).

Further as *perceived discrepancy* increases*,* there is search for supporting information aligned with the perception and belief. To capture this, a new node *seek information aligned with beliefs* is included.

Helena presents additional information supporting perceptions of a *discrepancy*.

> *Relevant in the current scenario, is the [intentional] conversion of traditional Service A to other services [limiting privileged processing]. We believe this to be an unfair practice. (1:11, 1698-2010)*

Similarly Tom presents supporting information highlighting that other parties have similar needs, which calls for a review of disparity between services.

In recent months another party has requested ThinkCo to create a special category of service for the exclusive use of their affiliated citizens. The anomaly which would be created by allowing this is not generally supported by us, but a new service which they could have access to, would most certainly meet the requirements. (2:16, 17-17)

As the node - s*eek for information aligned with belief* increases, the *cognitive dissonance* (of the individuals) increases. There are competing intrapersonal cognitive elements, which create discomfort (Festinger, 1957).

To illustrate this discomfort created by competing cognitive elements, for Helena, Service A was developed, specifically for her constituency, under the auspices of RegCo, which required significant effort at the time, yet there is now limited support in fulfilling what was an already agreed crucial service.

RegCo as overseer of the services facilitated the formation of Service A to promote fair access. (1:1, 250:600)

What makes the situation even worse, even where change requests were approved through the ThinkCo process, these are not done on time as would be expected or not done at all. (1:19, 495-721)

It is evident that urgent intervention is required to address the requirements of parties for whom Service A was initially designed. (1:24, 204-600)

For Tom, there is a lack of congruency between espoused RegCo principles and what is happening in practice. He adduces supporting information aligned with his belief:

In terms of RegCo's original principles, which were again re-iterated in 2010, Service B type services should be encouraged and preferred. Service B meets the criteria, and yet today has a lower status to Service A. (2:5, 15-15)

This dynamic of increasing intra-personal tension and discomfort, as a result of a *searching for information aligned with beliefs* caused by a *perceived discrepancy*, is captured by the theme "*ants in my pants*". It is a reinforcing loop (or deviation amplifying loop) (highlighted as R1) which drives action and behaviour of actors.

Figure 7.1.   Ants in my pants

*Figure 7.1.*For all diagrams to follow – the blue text represents the nodes (codes or categories) identified after 2nd cycle coding, The pink arrows depict the causal loop with the arrow head indicating the direction of causality. The + sign on the arrow head indicates that as the level of previous code/category increases (or is added to) so does the code/category it causes. The – sign indicates the opposite. The text in the middle of the diagram is always either R (representing a reinforcing loop) or B (signifying a balancing loop). Each loop is themed and for ease of referencing each loop is numbered e.g. R1.

Why does this dynamic occur?

Bacon (1620), in the Novum Organum, wrote,

> The human understanding when it has once adopted an opinion [...] draws all things else
> to support and agree with it. And though there be a greater number and weight of
> instances to be found on the other side, yet these it either neglects or despises, or else
> by some distinction sets aside or rejects. (p. 36)

As the *perceived discrepancy* increases, there is a search for confirmatory evidence supporting respective points of view. This confirmation bias also known as confirmatory bias or congeniality bias or myside bias - is the tendency of people to favour information that confirms their beliefs or hypotheses. People display this bias when they gather or remember information selectively, or when they interpret it in a biased way. The effect is stronger for emotionally charged issues and for deeply entrenched beliefs. It refers to how people read or access information that affirms their already established opinions, rather than referencing material that contradicts them – hence a confirmation bias (Hart, Albarracín, Eagly, Brechan, Lindberg, & Merrill, 2009; Nickerson, 1998; Stanovich, West, &, Toplak, 2013).

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This confirmation bias is explained as an unintentional strategy (rather than a deceptive one) and arises either through a combination of both "cold" (cognitive) and "hot" (motivated) mechanisms (Maccoun, 1998). It can thus be explained by, for example, cognitive limitations and the complexity of tasks - leading to people utilising heuristics or positive test strategies (Kahneman, 2011; Klayman & Ha, 1987; Nickerson, 1998) or motivational theories (Nickerson, 1998) such as the desire to believe or a combination of the two theories, with motivational factors preceding cognitive factors, which determines the size of the effect (Kunda, 1999). Only recently has it been demonstrated that the magnitude of the bias shows very little relation to intelligence and avoiding the bias is thus a developed rational thinking skill (Stanovich et al., 2013).

Lastly, *seeking for information aligned with beliefs* causes an increase in *cognitive dissonance* which seems contradictory to dissonance theory. This is not so. Whereas more generally, the *search for information aligned with beliefs* is usually aligned with being consistent (alignment between our attitudes and actions) and hence avoiding dissonance-increasing situations (Festinger, 1957, Kenworthy et al., 2011) - in the change context when there is a *perceived discrepancy*, the *search for information* is related to confirming the discrepancy, which in turn leads to increased *cognitive dissonance.*

In summary the micro-level dynamic that plays out is that of an increasing intrapersonal *cognitive dissonance* as there is increased *search or interpreting of information aligned with one's belief* – a confirmation bias, caused by a *perceived discrepancy* (with which actor's are emotionally connected to). This is depicted as an "*ants in my pants"* dynamic.

7.4.1.2. "Friends, romans, countrymen, lend me your ears"- B1

As the "*ants in my pants"* dynamic grows, and *cognitive dissonance* continues to increase, actors cannot remain in this state. They seek for ways of reducing or eliminating *cognitive dissonance* (Festinger, 1957; Telci et al., 2011). There is a crucial dynamic between our beliefs and our actions, and people strive for consistency between their internal and external lives (Kenworthy et al., 2011).

One effective way to reduce dissonance is to engage others, to speak out or (write).Both Helena and Tom were driven by their respective *perceived discrepancy* to share their frustrations with others. Helena indicates that the issues are not being tabled for the first time and so does Tom.

> *You are aware that representatives of ThinkCo attend our party's monthly meetings. The matters addressed in here are not new to them as it had been tabled, discussed and debated with no satisfactory outcome or resolution to date. (1:21, 970-1251)*

> *With reference to our previous discussions in this regard, I would hereby like to suggest that you consider an amendment to the policy in order to allow ThinkCo members to process Service B together with Service A. (2:1, 9-9)*

After attempts at various intervals to address issues with different parties, Tom and Helena are motivated to approach RegCo. They both write to Nelson. To capture this dynamic of reducing *dissonance* by engaging others, the node *initiate communication and influence seeking behaviour* is introduced. As *cognitive dissonance* increases there is an increase in node *initiate communication and influence seeking behaviour.*

This dynamic is themed, *"Friends, Romans, countrymen, lend me your ears…"* and is a balancing (or deviation counteracting loop) - (highlighted as B1). Communication and influence seeking increases as *cognitive dissonance* increases, which causes a reduction in *cognitive dissonance* of the individual experiencing dissonance. When something is amiss (there is discomfort), as humans, the more we talk to others about it (influencing others), the more it reduces intrapersonal tension or discomfort (*cognitive dissonance*).

Figure 7.2.   Friends, Romans, countrymen, lend me your ears…
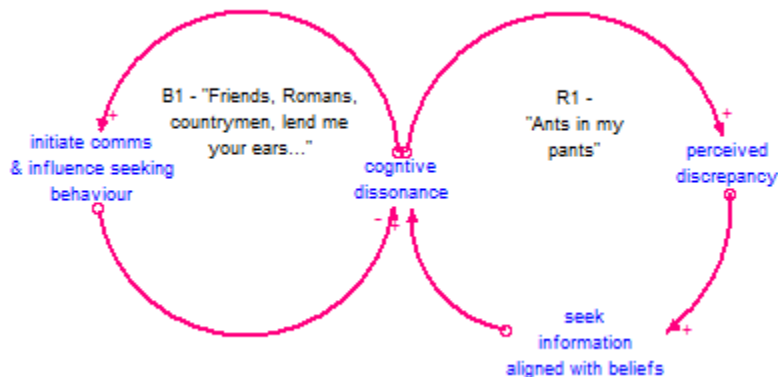
7.4.1.3. "Two peas in a pod" – B2

Once there was agreement by RegCo to meet, Tom approached Des to compile a presentation on the matters of concern, as well as to position possible solutions. Des captured his thoughts in a reflective memo on why he supported Tom's notion of a *perceived discrepancy*.

> [Tom sought Des's assistance with packaging a presentation for the first workshop with RegCo. He gladly assisted and put together a presentation. On reflection of why he did not pick up the issues and inaccuracies with the underlying assumptions of Service B (and its misalignment with principles), he could put it down to lack of experience as an alternate plausible assumption. This could not be the case as he had been integrally involved back at a ThinkCo member with the implementation of Service A.
>
> Another plausible alternative could be that he merely supported the ideas on the discrepancy, as he was forced to do so due to Tom being his superior. This was also not the case, as he had packaged the presentation based on his own understanding of the issues and very much directly from what was contained in the letter from Tom to Nelson. Tom and Des did not workshop the matter until after he packaged his views on the issue and potential solutions. So he was not coerced. He packaged the presentation based on his own reflection on the issues. He [like Tom] believed that the principles were compromised.
>
> So Tom and Des shared the same views on the topic, not because Tom was the boss and convinced him otherwise, but because they believed that a principle based approach should be adopted. Des honestly bought into the principles and in fact had crafted a document on [other] initiatives that should be pursued [by ThinkCo] that were aligned with principles. The bottom line was that Des felt that they supported each other through having a common mental model on the topic. They both believed that the principles were compromised and Service B was a superior service but was disadvantaged because of lack of strategic foresight a few years earlier]. (371:5, 3-7)

To capture this dynamic of how Des and Tom mobilised and supported each other, the following causal linkages are suggested. As *cognitive dissonance* increases, aside from *initiating communication and influence seeking behaviour,* there is also an increase in search for other people who are likely to share one's views, assumptions and beliefs. A new node *seek others with shared mental models* is introduced. As others with similar maps and underlying assumptions draw together, engage and interact, there is an increase in *shared mental models.*

As the stock of *shared mental models* increases, that is, actors share similar underlying assumptions, beliefs and values, this causes the actors to bond. This *bonding/coupling* through *shared mental models* is well articulated in the complexity theory literature (for e.g., Uhl-Bien & Marion, 2009).

This *bonding* in turn leads to increase in *social support*. Social support is where actors support the *perceived discrepancies*, proposed solutions or generally lend a supportive ear to other actors.

Seeking and obtaining *social support* from those who *bond* as a result of *shared mental models* could be seen throughout the case, on a number of different occasions, involving different actors. As an example, Des met with Tom to inform him of the meeting with Joe.

Des captured his disappointment with the session due to the ideas being tabled*.*
> *[My main issue with the document was that it focused on addressing citizen consents only. I explained to Tom that my concerns were around the suggestion of an ultimate solution being a single solution only]. (133:12, 14-14).*

Tom immediately confirmed that he did not support a Service D option *(133:14, 3-7).*

> *[Tom and Des were on the same page. They believed the Service D idea was in breach of the principles they laid down]. (133:12, 14-14)*

As further evidence of how people seek for others with similar beliefs and perceptions, one actor in his early written responses noted how people reach out to others.

> *I received calls from a number of people trying to get facts, unfortunately I was equally uninformed. People were concerned about the potential impact and wanted to know who was behind this and who lobbied with RegCo to have the services reviewed. (21:98, 536-536)*

The dynamic coded as *"two peas in a pod"* describes the following process: increasing *cognitive dissonance* causes growth in the node *seek others with shared mental models.* This, in turn, grows the stock of *shared mental models* (over time), enhancing *bonding*. Such *bonding* increases *social support* and the resultant decrease in *cognitive dissonance* for the actor who triggered the search, is highlighted as balancing loop B2 (a deviation counteracting loop).

Figure 7.3.   Two peas in a pod
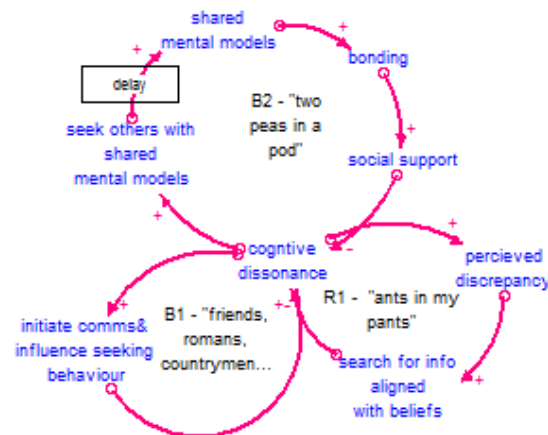
7.4.1.4.   "Love is blinding" – R2

Aside from *bonding* increasing as a result of increase in *shared mental models – the "love is blinding"* dynamic also strengthens bonding. Increasing *social support* grows trust, which reduces *critical reflection*, which in turn amplifies *bonding*. This is highlighted and themed *"love is blinding"*, R2 – a reinforcing dynamic.

Evidence of the *"love is blinding"* dynamic is demonstrated by a DemAlliance member. During the February 2013 joint clarification session the DemAlliance member was vociferous in his support of other DemAlliance members, for example Lin.

> *DemAlliance member: I support fully what Lin has said. We do not need to go through [detail] but this is not consultation. There are a lot of questions and uncertainty [from DemAlliance members] of how you see the Service C process and some of us came here with the expectation that this will be answered. (199:347, 214-214)*

Further the support for the proposed DemAlliance solution was explicit in their written feedback, as the DemAlliance member trusted what was being positioned by Lin, Pat and Helena without critically thinking though the implications of the option at that stage.

> *The proposed Service C, in its current design, has many inherent flaws and is not acceptable to Alliance4 members. (219:7, 51-51). Alliance4 supports the submission by DemAlliance. (219:21, 124-124)*

To motivate that *bonding* increases due to the *"love is blinding"* dynamic, the DemAlliance member subsequently changed responses as time proceeded.

The actor realises that although he supported DemAlliance, his interests may not be served through implementation of the DemAlliance proposed solution. He supported them based on *trust* and without *critical reflection* on what was being positioned. In an email addressed to both Tom and Des, the actor expressed his concerns.

> *After enquiring about the progress made since we received the communication from RegCo, Des informed me that Alliance4 participation on the Steerco of this initiative will be through three DemAlliance representatives. I understand that the aim is to limit the number of representatives on the Steerco.*
>
> *Although I believe the three DemAlliance individuals chosen bring a lot of experience to the table, they are not representative of all the constituencies represented by DemAlliance. Alliance4 uses DemAlliance structures for feedback [...] but experience has shown that we cannot depend on them to represent our interest – each party has only their own interest at heart. (372:1, 98-100)*

Further in a note to Pat, the actor surfaces this broken trust.

> *Hi Pat,*
>
> *We have just started with this initiative and I am already lost with regards to the feedback and input process and participation in the work groups.*
>
> *Alliance4 have submitted feedback to the nominated DemAlliance representatives (Helena and you). Initially you have forwarded all DemAlliance member submissions individually to ThinkCo. Then it was communicated that you are requested to collate all DemAlliance input into one submission. You would call a meeting of all DemAlliance members to draft the combined submission – which has not happened yet. (372:2, 278-282)*
>
> *This workshop referred to in your communication (scheduled for 1 November) – who will attend the workshop? Who determined the representation?*
>
> *Who drafted this attached document? I would have thought that this would be the product of a work group?*
>
> *What decisions will be made by the Steerco? (372:3, 288-292)*

To capture the process, the reinforcing loop R2 – *"love is blinding"* is included. As noted, this dynamic is a reinforcing cycle, triggered by increasing *social support,* which grew as a result of being approached by others with *shared mental models*.

Figure 7.4.   Love is blinding
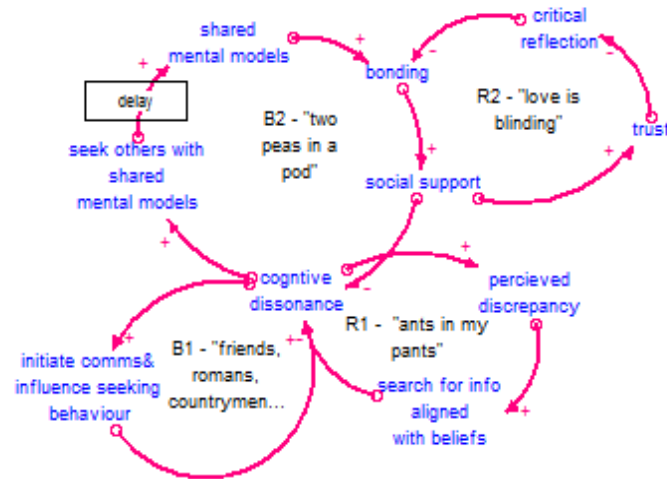
The process of formation of groups in organisation theory is usually described in stages form, norm, storm and perform (Kozlowski & Ilgen, 2006; Tuckman & Jensen, 1977) or explained through social identity or social categorisation theory (social identity perspectives), where the traditional social cohesion approach traces group formation to processes of interpersonal attraction, while the social identity approach defines the group in cognitive terms and considers identification, or self-categorization, to be the mechanism of psychological group formation. Attraction influences group formation by acting, under certain specifiable conditions, as a cognitive criterion for common category membership (Hogg & Turner, 1985). Within these theories individuals are intrinsically motivated (either cognitively or affectively) to achieve positive distinctiveness through identifying with a group (Haslam, Reicher & Platow, 2011).

In the context of change, where emotions are often high and matters complex and novel, complexity and dissonance theory present how and why coalitions are formed by presenting what goes on dynamically from an intrapersonal level to the interpersonal and group levels, thus creating nuanced insight in terms of how and why aggregates form.

7.4.1.5. Summary and meso-propositions – how and why do aggregates form?

From the case data Tom and Des formed an aggregate (a coalition, an alliance). Taken together the dynamics captured above explain and predict how an aggregate (coalition or clique is formed).

"Ants in my pants" highlights that from a *perceived discrepancy,* actors *search for information aligned with beliefs* which adds to *cognitive dissonance.* Actors cannot stay in this state and *"Friends, Romans and countrymen, lend me your ears…"* dynamic highlights how actors seek to influence others thus assisting in the reduction of *cognitive dissonance*. Speaking to anyone though is not enough; actors seek for others who share ideas, notions, beliefs, assumptions or values. *"Two peas in a pod"* and *"love is blinding"* emphasise how this dynamic plays out leading to reduction in *cognitive dissonance* and ultimately the mobilising of a coalition/clique.

In sum, these four dynamics collectively can be themed - *"birds of a feather flock together"* and explains how and why aggregates (coalitions) form by utilising complexity, social cognitive theory and specifically Festinger's (1957) theory of cognitive dissonance.

From the above the following meso-level propositions are posited.

Proposition 1a: The greater the perceived discrepancy by an actor, the greater the search by such actor for information motivating the discrepancy and the greater the actor's cognitive dissonance. The more the actor experiences cognitive dissonance, the more likely is the actor to influence the formation of an aggregate.

Alternate formulation - proposition 1a: As the *"ants in my pants"* dynamic (R1) increases/intensifies, the more likely that aggregation will occur.

Proposition 1b: The greater the cognitive dissonance, the more actors influence other actors, the more likely that aggregation will occur.

Alternate formulation - proposition 1b: As the *"Friends, Romans and countrymen lend me your ears"* dynamic (B1) increases, the more likely that aggregation will occur.

Proposition 1c: The more actors reach out to others with shared mental models, the greater the support for movement away from the status quo, the greater the bonding between these actors and the more likely aggregation will occur.

Alternate formulation - proposition 1c: As the *"two peas in a pod"* dynamic (B2) increases the more likely aggregation will occur.

Proposition 1d: The greater the social support between actors, the more they trust each other and do not challenge the perceived discrepancy, and the more likely they will bond and aggregation will occur.

Alternate formulation - proposition 1d: As the *"love is blinding"* dynamic (R2) intensifies; the more likely actors will bond and aggregation occurs.

Proposition 2: The more actors aggregate, the more they influence the system towards a Disequilibrium State.

Alternate formulation - proposition 2: As the *"birds of a feather flock together"* dynamic (R1, B1, B2, R2) intensifies, the more actors influence the system towards a Disequilibrium State.

Proposition 3: Aggregation is a necessary condition for the initiation and intensifying of a Disequilibrium condition.

Alternate formulation - proposition 3: The *"birds of a feather flock together"* dynamic (R1, B1, B2, R2) is a necessary condition for the initiation and intensifying of a Disequilibrium condition.

7.4.2. How does correlation (common understanding) emerge?

To unpack the dynamic of how correlation emerges, the interaction (mostly) between Steerco members from January 2011 through to November 2012 (covering 7 Steering Committee meetings) is brought into focus. Through the Steerco engagements it can be observed that the members of Steerco were eventually correlated (i.e., they shared a common understanding on change beliefs and all members bought in to the discrepancy and appropriateness of the solutions). How did correlation emerge?

Correlation is the product of accommodations that evolve when different people or groups struggle to work out conflicting constraints that inhibit their need preferences (Marion & Uhl-Bien, 2001). Correlation thus reflects the emergence of common understanding in interacting social systems which can be generated by specific and repeated language that helps give meaning to unfolding events, or through symbols that foster the development of a shared understanding (Lichtenstein & Plowman, 2009; Plowman, Silansky, Beck, Baker, Kulkarni, & Travis, 2007).

In the change context, with rich, contextual, longitudinal data could a more nuanced understanding of how correlation emerges be explained whilst utilising and integrating what is already known through complexity theory? This includes the understanding that correlation is a product of interaction; it is achieved through working out conflicting constraints, brought about through enabling leaders and behaviours such as repeated language that helps with making sense of the change and motivates actors to rise above their own needs.

Six causal loops with categories that emerged from the data are suggested to answer the research sub-question – how does correlation (common understanding) emerge? These are themed:
- *"Friends, Romans, countrymen, lend me your ears…"*
- *"Setting the cat amongst the pigeons"*
- *"Getting onto the same page"*
- *"Rushing to solutions"*
- *"Shedding light on the options"*

- *"Yes, we can…"*

The first dynamic has already been described. *"Friends, Romans, countrymen, lend me your ears…"* is an influence-seeking process resulting from increasing *cognitive dissonance*. Increasing intrapersonal discomfort drives reaching out to others. Tom captures this increasing need to influence others in the first Steerco session, with his opening remarks.

> *Tom: This issue has been going around for some time. You'll recall Helena's letter and mine related to the topic. We thought a good approach will be to get a number of us around the table to try and unpack what the main issues are and how we take this forward. We have prepared a short presentation that can guide the conversation. (4:47, 5-5)*

7.4.2.1.   "Setting the cat amongst the pigeons" – R3

Based on the contrasting letters from Tom and Helena, Nelson was exposed to new information. Based on the positions and requests emphasised in the respective letters, Nelson had *doubts and questions* that required answers. After some discussion and debate Nelson demonstrates the increase in *cognitive dissonance* caused by exposure to this new information.

Nelson appeared tense and worried. His main concern was how some parties (mostly DemAlliance) would respond to this. Nelson questioned if creating preference was not against the principles.

> *Nelson: I agree with principles but should different services be given preference? This is going to shake the boat a bit? How will DemAlliance respond to this? […] I feel like I am on a precipice and you guys are gently pushing me from the back. (4:48, 42-44)*

As further evidence of an increase to *cognitive dissonance* resulting from *involuntary exposure to new information,* responses from different parties who were involuntarily exposed to the 3 philosophies in March 2011 (as a result of communication initiated by RegCo) are presented. As an example, Helena responded in her written communication noting that they were not aware or informed by RegCo of any need to change the status quo.

> *We acknowledge that the invitation for the gathering of information relate to DemAlliance communication […] and other information received by RegCo. However, the ultimate objective of the analysis is not clear. This is true due to the fact that DemAlliance received no official request or notification of any request by RegCo to change the initial agreements / reasons for the creation of Service A.*

Without understanding the specific purpose and desired end result, appropriate or applicable discussion and contribution is difficult. (21:9, 916, 916)

Another participant similarly raises their *doubts and questions.*

We believe that a lot of confusion has been created with industry as a result of this review, especially in light of the fact that the current services seems to work for all parties and especially the [disadvantaged] citizen. In the premise, we are not quite sure what the core issue is, that triggered this review and kindly request RegCo to be transparent in this regard and to share with us the real issue at hand [...]. (103:25, 512-999)

Similarly after the first industry session with ThinkCo, a ThinkCo member highlights these *doubts and questions* which cause increasing *cognitive dissonance (73-33, 7-8).*

This dynamic of increasing *cognitive dissonance* as a result of *involuntary exposure to new information* is represented by the reinforcing dynamic labelled "*setting the cat amongst the pigeons".* It is a reinforcing loop (R3) that causes increasing *dissonance.* Increasing *communication and influence seeking behaviour* causes an increase to *involuntary exposure to new information.* This seeds growth to actors *doubts and questions,* resulting in rising of the actors *cognitive dissonance.*

Figure 7.5.   Setting the cat amongst the pigeons
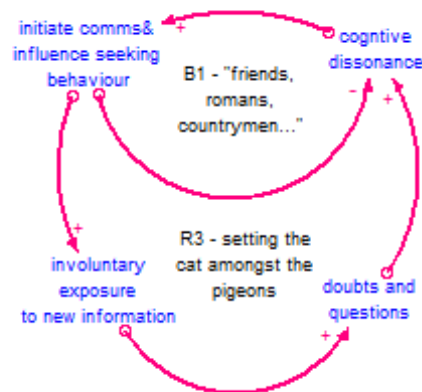
Why does this happen?

The theory of dissonance explains the above increasing *cognitive dissonance* (within actors) in situations where there is *involuntary exposure to new information*, leading to *increasing doubts and questions* (as a result of conflicting cognitive elements) (Festinger, 1957)*.*

7.4.2.2. "Getting onto the same page" – R4

The *doubts and questions* on change create increasing *pressure to engage.* As an example, Nelson suggested that he pull his team together to workshop the initial matter raised by Helena and Tom. He included his most senior people, Jack and Joe.

Throughout the case, as *doubts and questions* on change surface, there is an increasing call for engagement and thus increasing *pressure to engage*, which leads to further *engagement*.

Helena in her response on the 3 philosophies captures the need for engagement.

> *However, we are convinced that under the auspices of RegCo and ThinkCo through debate and engagement, new generation solutions and approaches can be developed without prejudicing citizens. (96:36, 231-231)*

Actors continuously pushed for further engagement as the process continued.

> *We look forward to hearing from you in due course and would like to suggest further consultation. (103:26, 341-436)*

> *A board decision was taken and I have to request a consultation with the chairperson and members of the Steerco. (114:2, 5-5)*

Two nodes are added to the causal map namely *pressure to engage* and *engagement.* In summary increasing *involuntary exposure to information* causes growth in *doubts and questions* which creates the added *pressure to engage* prompting increasing *engagement,* as witnessed in the case *(176:136, 35-35).*

Figure 7.6.   Increasing engagement
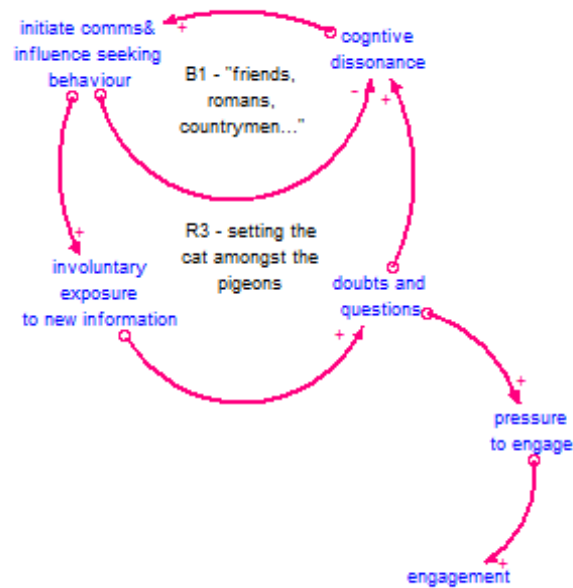
During the on-going engagement process many questions on the *perceived discrepancy* arise as the *engagement* process increases. An actor captures this when prompting on what the end goal is - what is the problem statement?

> *Actor: I may have a similar question on this. So first I want to ask […] so please understand that I'm not being difficult […]. Can we just understand the end goal? Is it simply we want a Service C - is that the end goal. And what's the problem statement, because I'm not sure if we all understand or have a common understanding of the problem. (171:193, 108-108)*

Other actors ask for the same clarity on the *perceived discrepancy*.

> *Participant: So the concern I have is that - are we being thorough in deriving at the problem statement. (199:322, 70-70)*

The *perceived discrepancy* is clear though in the minds of the Steerco. This clarity was achieved through the on-going, respective Steerco engagements and continuous clarification of the problem. Right from the first Steerco, many Steerco members bought into the discrepancy. Any scepticism and doubt was addressed by bringing the right information to bear on the problem (e.g., the claim of compromised principles *(4-26, 36-36); (4:29, 41-41); (4:34, 45-45)* and drawing attention to the problem at different levels. During the 2nd Steerco Nelson still remained doubtful and hesitant. At the end of the Steerco though, Nelson was supportive and on board.

[Nelson still appeared sceptical and was curious to see how specific respondents felt about the different philosophies. (42:10, 482-599)

Des then ran through the original intent of Service A. He differentiated between the purpose of Service A and the purpose of this review. (42:11, 602-727)

The purpose of Service A or the original intent of Service A, he emphasised, was to provide a fair and equitable services environment to ALL constituencies. (42:42,730-873)

At this stage he tested with the Steerco if they were in support and agreement with the original intent of Service A. All Steerco members present agreed on the original intent. (42:12, 990-1210)

Des then went on to highlight the purpose of this review. He captured that the purpose of the review was to test whether the Service A implementation met its original intent and simultaneously positioned the changing market dynamic. He then captured that the purpose of this review was to come out with a recommendation to address the current issues and to enable a new desired future end state]. (42:13, 1214-1629)

Des then went on to articulate the problem/discrepancy. Des categorised the problem under 3 levels. He noted that the problem could be viewed at different levels namely the strategic level, the business level and the operational level.

He noted that at the strategic level there was misalignment or incongruence between principles and what was going on in practice. He prompted Steerco members that they would most likely ask where the evidence for this was. He provided two examples as a means of demonstrating this discrepancy *(42:17, 2776-3147).*

Des checked with Steerco members that they were in agreement with the problems captured.

[There was unanimous agreement that the problems highlighted were indeed the current issues that were being experienced]. (42:21, 1361-1612)

With agreement on the problem, Des moved on to cover the much anticipated responses by different constituencies. Des captured recognition that the Steerco was on its way to "getting onto the same page".

[I was also convinced that the meeting was well received based on Tom's comments in the parking area. Tom was complimentary and suggested that the presentation was well done.

He believed that as Steerco members the crux of the issue was now well understood
[…].The good news was that as a Steerco we were beginning to operate as one unit].
(42:47, 1336-2908)

Packaging the right information and bringing it to bear on the discrepancy, reflecting and talking through why arguments by actors hold or not, demonstrating practical experience of how the services work and refining the problem statement was key in getting the Steerco onto the same page *(42:47, 1336-2908)*. Jack's comment during the 8th Steerco (Feb 2013) highlights the clarity the Steerco had on the *perceived discrepancy.*

Jack: sorry, don't the parties understand that we are trying to move to a situation where we address the preferential servicing issue, strengthen consents and get rid of citizen complaints. Do they not understand that? (186:225, 10-12)

To depict the dynamic of how the Steerco achieved *getting onto the same page* – achieving *positive sentiment on the gap,* the suggestion from the data are that as there is on-going *engagement,* there is an increasing *exposure to complex problem solving skills,* which mediates and brings *clarity on discrepancy,* leading to *common understanding (correlation)* and ultimately even further *engagement.* This leads to exploration of potential solutions (depicted in the dynamic to follow). Reinforcing loop R4, "*getting onto the same page"* is highlighted below.

Figure 7.7.   Getting onto the same page
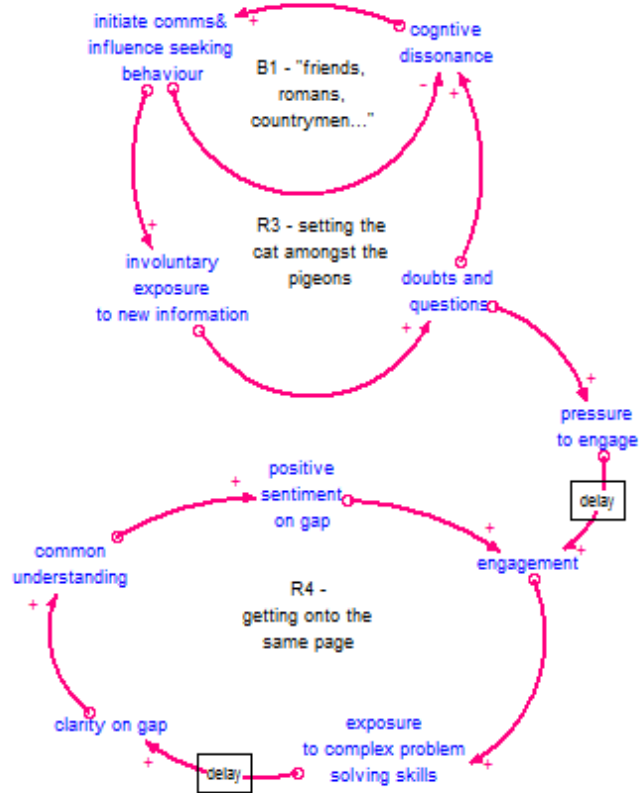
As seen from the case data, the problems that are being addressed in a complex environment are sometimes not clear *(171:193, 108-108); (199:322, 70-70).* They are not the "run of the mill" or "business as usual" issues. They are multifaceted and are not routine problems. Changes are usually fundamental. Problems may be ill-defined and novel. In this case although Service A was created in 2005, nobody anticipated the unintended consequences of the service, including the environmental changes much later (MacKay & Chia, 2013).

Given the above, the skills required from change leaders especially in bringing clarity to the problem/discrepancy is suggested to be *complex problem solving skills* (Mumford, Campion, & Morgeson, 2007; Mumford, Zaccaro, Harding, Jacks & Fleishman, 2000). It is important to unpack this category further. Through characteristic coding (defined in the methodology section), including analytic memoing and reflecting on the theory, some of the features or properties of this category are unpacked.

Properties of complex problem solving skills

Properties are characteristics that define and describe categories (Corbin & Strauss, 2008; Saldanha, 2009). Saldanha (2009) clarifies that one purpose of 2nd cycle coding is to strategically reassemble the data that were "split" or "fractured" during the initial coding process. The characteristic coding method relates categories to subcategories and/or codes and helps specify the features of a category.

Complex problem solving skills are usually applied to ill-defined problems. In a reflective memo on *complex problem solving skills,* the following properties of an ill-defined problem were firstly identified:

- Difficult defining exactly what the problem is in the first place
- Tends to be novel (not like anything else experienced, not routine)
- Problem can be construed in a number of different ways
- Lacks a single solution path
- No right answer or wrong answer
- May not be clear exactly what information should be brought to bear on the problem
- Plethora of available information, some of which is relevant to the problem
- Difficult to obtain accurate, timely information

Then *complex problem solving skills* [category] was seen to have the following properties [codes]. *Complex problem solving skills* are related to the capability to solve novel, ill-defined problems. The skills include properties such as:

- *Defining significant novel, ill-defined problems* (that cannot be solved simply through the routine applications of extant knowledge)
- *Gathering information*
- *Formulating ideas*
- *Extracting relevant knowledge*, particularly representations derived from prior experience and knowledge of one's job, which is reshaped and reformed to generate new solutions
- *Developing clarity on the problem being addressed*
- *Constructing prototype plans* for solving the problem

Mumford et al. (2000) note that leaders must define significant problems, gather information, formulate ideas, and construct prototype plans for solving the problem. These *complex, creative problem-solving skills* imply a need for expertise bearing on both the nature of the problem and operates within a complex, ambiguous environment (Lord & Hall, 2005; Mumford, Friedrich, Caughron & Byrne, 2007).

In problem-focused cognition, leaders are attempting to solve novel, ill-defined problems. Novel, ill-defined problems cannot be solved simply through the routine applications of extant knowledge (Baughman & Mumford, 1995). Instead, relevant knowledge, particularly representations derived from prior experience and knowledge of one's job must be reshaped and reformed to generate new solutions (Mumford et al.*,* 2000). These skills defined under the overarching category of strategic skills, developed through experience and found mostly at higher echelons are therefore rare complex cognitive skills in an organisation (Mumford et al., 2007). As captured in a reflective memo, complex problem solving skills represent unique capacities reflecting something above and beyond general intelligence (Mumford et al.*,* 2000).

> *[A metaphor of what this would be like is that of fine tuning the frequency of a radio to strip out the noise and as you fine tune you are able to hit the right radio station. It is a matter of understanding all the variety of feedback, issues, challenges that are being put forth and then the skill to understand the arguments, debates and filter them (within the problem context) to make sense of it. As this filtering process occurs, it brings clarity. There is demonstration of a good grasp of the problem/s, a stripping out of noise (less relevant or less important information) that may be clouding the issue and then fine tuning the issues to bring clarity to the matters on hand.*
> *It requires the ability to be able to deal with multiple variables, multiple contexts, multiple issues, and clarifying for e.g. the problem/s one is dealing with. So like the dial of a radio, there is a movement/adjustment of the dial, that eventually through listening to whether you are moving away from the clarity (music) or towards greater clarity, (filtering of information to make sense of where it fits in conceptually) that in the process brings clarity and sense to the issues at hand. (322:2, 5-5). Another similar metaphor is that of focusing a telescope. (325:1, 3-3)*

In summary, a *complex problem solving skill* is the cognitive capability (beyond general intelligence) of focusing on and bringing clarity to a novel, ill-defined problem, using past knowledge, experience and expertise, refining and communicating the essence of the problem and also suggesting initial prototype solutions.

These are strategic skills usually found in higher echelons of the strataplex (Mumford et al., 2007). The skills based leadership theory together with complexity and change theory explains how and why *positive sentiment on gap* is achieved.

7.4.2.3.   "Rushing to solutions" – R5

As soon as the *doubts and questions* on discrepancy begin to increase, actors start searching for solutions and proposing solutions. Instead of spending time clarifying the *discrepancy*, there is a rush to offer solutions.

A early as the first Steerco engagement, this played out.

> *Actor: So what are we going to do about this? We could just include Service C? (4:24, 32-32)*

Similarly, through the consultation process as different parties raise their *doubts and questions,* they are also quick to offer solutions.

> *In particular, we propose a series of specific proposals for wider consideration. (21:100, 16-16)*

> *Will it not be more productive to spend the energy of the resources on Project Integrate? The parties need to buy into the Project Integrate solution and if possible the industry should not require them to make major changes to their current services and [we should] rather "sell" Project Integrate. (21:29, 539-539)*

The prompting of proposed solutions leads to *questions on the appropriateness of solutions* and increasing *pressure to engage*.

> *Regarding their proposal, my immediate response is to consider whether we wish to give Service A the "same" status as Service B? (81:6, 7-7). To me, some of our principles are thrown out of the window and the principle of "consents" placed first. Some food for thought! (81:4, 7-9)*

A participant makes this clear in one of the work sessions, as he captures this rushing to *proposed solutions* and *questions the appropriateness of the solutions*, as well as the increasing *pressure to engage*.

> *Actor: So there's a lot of consideration around this proposal and I think we need to be cautious about this idea of principles versus what the proposal is and how it actually meets those objectives. […] it doesn't make the solution the right solution.*

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It almost is for me [...] that we are taking an absolute leap in terms of this and I almost feel like we are rushing to a solution. (171:197, 100-100). Surely we almost do need to go through these things in [a structured] way, [...] otherwise we are going to be to-ing and fro-ing [...]. (171:198, 100-100).

Another actor: Maybe I have not articulated myself very clearly [...] - what we want is an engagement with someone who can explain this model to us. To take us through each step meaningfully. (171:168, 180-180)

This dynamic of *rushing to solutions* is captured as a reinforcing loop R5. As *doubts and questions* grow, counter-intuitively there is growing *pressure for solutions.* As *proposed solutions* are tabled more q*uestions on appropriateness of solutions* are raised which leads to even greater *pressure to engage.*

Figure 7.8.   Rushing to solutions

Why does *rushing to solutions* happen?

Two possible explanations for why this occurs. The first explanation uses dissonance theory and suggests that to reduce *dissonance* created from the rising *doubts and questions,* quick solutions (aligned with current mental models) are offered, ultimately to maintain things as close to the status quo as possible. The essence of this explanation lies in the underlying motivation to reduce *dissonance* and maintain consistency (Festinger, 1957).

The second explanation leverages two modes of thinking labelled System 1 and System 2. System 1 operates automatically and quickly, with little or no effort and no sense of voluntary control. System 2 allocates attention to the effortful mental activities that demand it, including complex computations. The operations of System 2 are often associated with the subjective experience of agency, choice and concentration (Kahneman, 2003, 2011).

Due to the complex and non-linear nature of the change at hand, dealing with such complexity requires effort (namely the operation of System 2). As complexity (at the system level increases) and intrapersonal *dissonance* increases, System 1 rushes to provide knee-jerk reactions and in the process ill-thought through solutions are suggested. In Festinger's words – a human being is not a rational one, it is a rationalising one – and in this context the easiest, quickest answers are provided (via System 1) to reduce *dissonance*.

7.4.2.4.   "Shedding light on the options" – R6

The increasing *pressure to engage* as a result of increasing number of *proposed solutions* and *questions on appropriateness of solutions* places a demand for increasing skills and capabilities to consider proposed solutions, assess their pros and cons, bring clarification as to what exactly is being proposed, why they make sense or not and what unintended and downstream consequences may arise.

During the 2nd Steerco, after many suggested solutions were tabled, Des and Joe listed the various options in a matrix and considered their pros and cons against the principles and the unintended consequences *(38:10, 120-186); (38:11, 352-388); (38:12, 768-946)*. The working group assessed each of the proposals and provided clarification for their position on each to the Steerco.

For example, one participant demanded focus on Project Integrate *(38:13, 362-394)* to which the working group responded.

> *Project Integrate is an important strategic project. It will provide flexibility from a servicing standards perspective. However it has little potential to address the problem statements of a more strategic nature (and policy perspective). (38:14, 398-608)*

Through the process of *engagement* with the Steerco and ensuring that each proposal was carefully reviewed, its merit considered, other solutions suggested by the workgroup, the workgroup managed to bring clarity on solutions (and clarify the *appropriateness of such solutions)* to the Steerco, leading to *common understanding* and ultimately *positive sentiment on the benefits* of the proposed solution.

> [*The Steerco session was a significant milestone for the working group and the Steerco as a whole. Des and Joe now had all Steerco members on board, especially Nelson. Nelson appeared impressed in the manner with which specific actions had been dealt out. Each item was taken, assessed and analysis conducted with a logical conclusion presented. Des thought that this robust approach in dealing with each issue, convinced Nelson that he was dealing with a group that had the capability of unpacking what the problems were, defining potential solutions and engaging with the industry in a manner that could lead to positive results. This was as a result of hard work during the year and a deep commitment to leave no stone unturned, that is, to deal out whatever issues were thrown at them.*
>
> *Tom was suitably impressed after the meeting. They met in the parking lot of the country club. He openly congratulated Des for a job well done. He indicated that Nelson was now convinced after a year of hard work that they were on the right track and that this made sense. He believed that this is why Nelson was happy to move on and for them to craft a policy position]. (58:28, 14-16)*

This dynamic of reaching *common understanding* on the solution and positive sentiment on the benefit *(valence)* (Armenakis & Harris, 2009) - is depicted by the reinforcing loop R6, "*shedding light on the options".* Increasing *engagement* leads to increasing exposure to *solution construction skills,* which brings increasing *clarity to solution.* It is this increasing clarity that leads to growth in the stock of *common understanding.* The virtuous cycle causes further *engagement* and even further increase in *correlation.*

Figure 7.9.   Shedding light on options
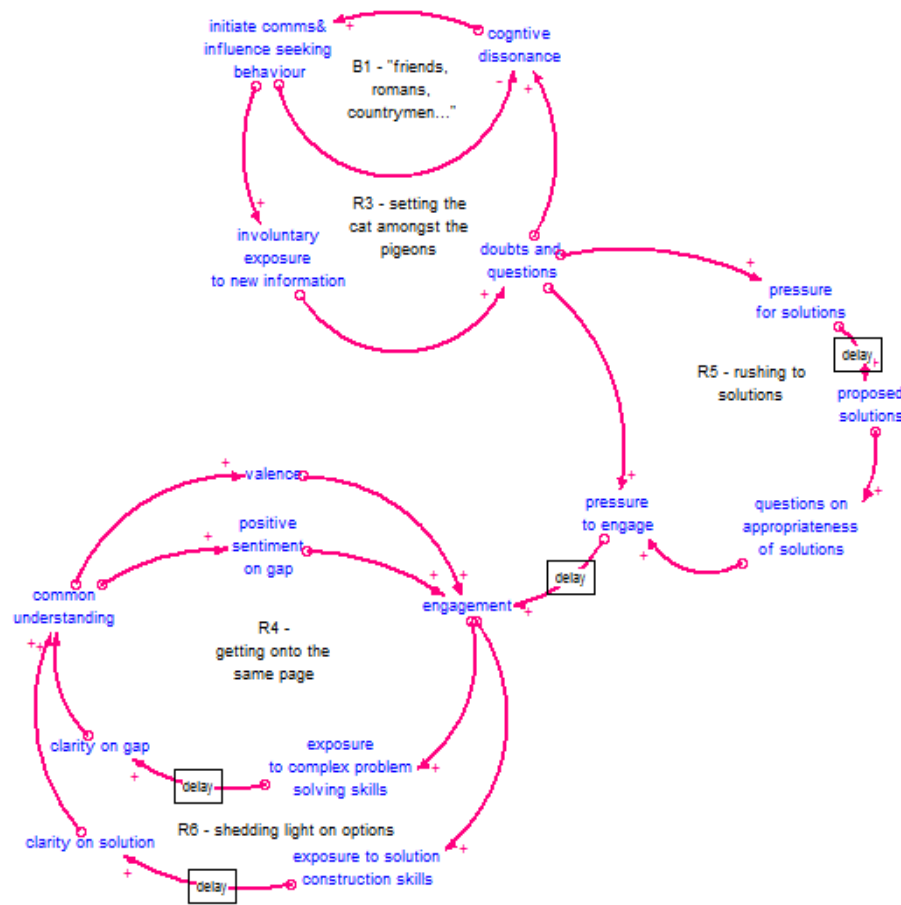
Properties of solution construction skills

Viable solutions to leadership problems are those that work within the context of the organisation. Thus, leaders must go outside themselves, appraising the implications of a solution within the organisational context (Mumford et al., 2000).

Mumford et al. (2000) note that relatively little is known about these solution construction skills, although plausible arguments have been made for the need to attend to restrictions (Schor, 1983), identify downstream consequences (Mumford & Peterson, 1999), and identify key causes (Bass, 1990). These specific skills are also not given enough attention nor unpacked sufficiently in the Mumford et al. (2007) leadership strataplex framework.

Moreover, the effective exercise of these skills is likely to depend on mental models and expertise reflecting working interrelationships in the organisation. These mental models, and the associated skills, allow leaders to revise prototype solutions to create workable solutions within the organisational context (Mumford et al., 2000).

The properties [codes] of *solution construction skills [category]* were unpacked in an analytical memo by reflecting on the data and theory and can be summarised as follows.

Situating problem [sub-category]
- *Grasping problem* at hand and situating it within the organisational context

Shaping & contrasting solutions [sub-category]
- *Crafting potential options* (based on mental models of interrelationships in the organisation)
- *Defining pros and cons of options* (considering positive and negative effects)
- *Weighting priorities*

Evaluating consequences [sub-category]
- *Assessing resource and operational impacts*
- *Assessing downstream consequences*
- *Assessing long term objectives*

Communicating options [sub-category]
- *Making convincing recommendations*

Further balancing strategies (focusing on positive and negative effects and consequences of solutions) influence the quality, originality, and elegance of solutions. Focusing on only the positive – or "viewing the glass half full" – is not ideal for solving complex organisational problems (Norem & Chang, 2002). Rather, it appears that it is necessary to "see the glass as half full **and** half empty" (Antes & Mumford, 2012).

Not enough attention was given in the case by the change leaders on the "glass being half empty". As an example, the excerpt reflects a discussion between ThinkCo members and the Working Group and challenges are put out in terms of the proposed Service C solution.

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Participant: What about the risk transfer elements of this? One of the parties gets […] and then we have a problem. Where does the risk lie here?

Tom: This is the same as today when one party needs to [provide] services and may fall over.

Participant: You saying it quite glibly, but who is taking on the risk?

Another participant: This is not an operational issue; I think it's a fundamental issue of the legal rights and obligations to the citizen when Service C is used. (184:195, 322-328)

Another participant: This is different from the current environment. So I keep hearing that we will deal with these things. My concern is that we're going to get a policy change and it doesn't matter what argument or concerns are being raised by the participants here. We will have a policy change and then we will sit around and debate this. (184:196, 347-347)

7.4.2.5.   "Yes, we can…" – R7

Developing *correlation (common understanding)* does not take place in isolation, outside what is going on from the debates and discussions amongst many other stakeholders and constituencies. Aside from the *complex problem solving skills* and *solution construction skills,* change participants are required on an on-going basis to assess and make sense of how solutions would impact different constituencies, motivate why solutions are appropriate or not, assess where different stakeholders are coming from and keep the aggregate together. This skillset goes beyond clarifying the problem or constructing solutions.

An example highlighting these required skills is captured via a telephonic conversation between Joe and Des, on receiving written feedback from Lin in February 2013, questioning the appropriateness of solutions. During the debate around Project Integrate, Joe began doubting the appropriateness of the solutions tabled. Des uses his skills in expressing discussion points to provide clarity and build consensus.

> *Des: I think we have to carefully consider each of the arguments that are being put on the table. However, I think we have to be careful that [...]. For example – please bear with me– I don't mean to frustrate us when I keep repeating that – if we define the problem as being […], then all we will be solving is [...]. To be more clear, if the issue is about […] then [...]. This is why Lin is arguing that Project Integrate will resolve the issue. I think, though, that our argument is a bit broader. Again, please bear with me […].*
> *As we defined it, our problem is twofold […]. That means that […]. For this reason we prefer […].*

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Joe: it's good that we are having this discussion. I appreciate the opportunity to bounce these thoughts off you. It's quite correct. (189:44, 6-39)

Clarifying the gap and proposing solutions are not enough; getting to common understanding requires people skills. Engagement and effectively applied social skills foster an interpersonal dynamic that aids in developing common understanding of the problem and the appropriateness of different solutions. This dynamic can operate alongside the clarification of problems and the consideration of solutions.

This skillset described requires reflection and insight into the needs and goals of different constituencies. It also requires an understanding of the social dynamics playing out in the change domain. It requires awareness of the solution fit and the appropriateness of such to different systems and constituencies. This complex skill also includes choosing behaviour and responses carefully as one engages with different individuals.

To capture this dynamic of increasing *common understanding* through increasing *clarity on the appropriateness of solutions and way forward*, ultimately leading to increased *efficacy* (belief that there are the requisite resources and the capability of making the change happen (Armenakis & Harris, 2009)), the *"yes, we can…"* reinforcing loop (R7) is introduced. As *engagement* increases, there is increasing exposure to *social skills,* which brings increasing *clarity to appropriateness of solution and way forward.* This *clarity* grows the stock of *common understanding* and promotes a virtuous cycle of even further *engagement*. This leads to higher levels of *correlation.*

Figure 7.10.   Yes, we can!
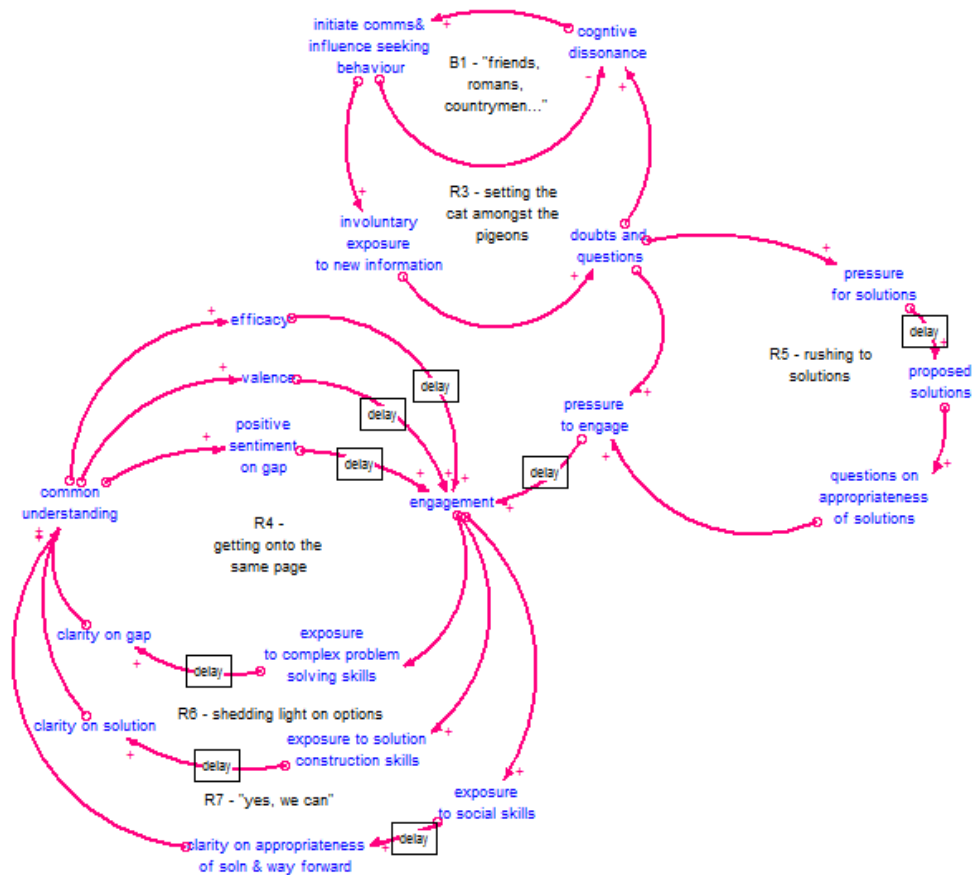
Properties of social skills

Through characteristic coding, analytic memoing and reflection on theory, the complex cognitive skill set categorised as a *social skill* is conceptualised as follows:

Social skills [category] encompass the following sub-categories:

- *Demonstrating social perceptiveness [sub-category]* – *Providing insight* into the needs, goals, demands, and problems of different organisational constituencies

- *Demonstrating behavioural flexibility [sub-category]* - *Adapting behaviour* in accordance with the demands of the situation

- *Demonstrating social performance skills [sub-category]* - *Communicating, persuading, negotiating, managing conflict, coaching and motivating*

- *Demonstrating social judgement [sub-category]* – *Providing wisdom* (of people and systems(solutions))

Bringing clarity to problems and suggesting solutions is not enough. Getting others to work towards solutions, marshalling support, communicating, guiding, negotiating, persuading and motivating forms part of a *complex social skill* and all takes place within a distinctly social context (Boal & Hooijberg, 2000; Mumford et al., 2000).

The *social skills* can be categorised through four specific sub-categories. *Social perceptiveness* is a complex *social skill* involving insight (wisdom) into the needs, goals, demands, and problems of different organisational constituencies. From the case data it also includes insight into the mental models and cognitive styles of actors and why they support or lack buy-in to change. It's a capability that enables critical evaluation of actor's responses. In organisational settings, *social perceptiveness* enables leaders to identify emerging problems, the potential influence of others on solutions, and their need for mobilising into groups/cliques. It is about understanding and monitoring social dynamics within the problem domain (Mumford et al., 2000; Mumford et al., 2007).

It is not enough, however, for leaders to be aware of others. They must also adjust their behaviour to cope with the requirements imposed by their perceptions of others. *Behavioural flexibility* encompasses the skill of being capable of changing behaviour in accordance with the demands of the situation (Boal & Hooijberg, 2000; Mumford et al., 2000).

Although *social perceptiveness* and *behavioural flexibility* represent key *social skills*, laying a foundation for effective leadership by providing leaders with the capability to understand the social setting and respond to the dynamics of this setting, leaders must also possess a host of other *social performance skills*. These include communication and persuasion; negotiation; conflict management; and coaching (Mumford et al*.,* 2000; Mumford et al*.,* 2007).

Lastly *social judgment skills* reflect the capability to firstly check oneself and not get caught up in one's own suggested perspective on solutions. It requires personal appraisal and perspective-taking including *self-objectivity, self-reflection, systems perception, awareness of solution fit, judgment under uncertain conditions,* and *systems commitment*. Objectivity would seem to be necessary whenever one is dealing with a complex system where feedback is ambiguous.

Along similar lines, sensitivity to issues of solution appropriateness (checking both positive and negative effects), integration of potential solutions with the practical demands of the organisation requires perspective-taking of the capacity to move beyond the problem to see other ways in which solutions can be useful. Awareness of different constituencies is likely to be important when integrating solutions into an organisation composed of rather loosely linked subsystems, each having somewhat different concerns, responsibilities, and functions (Antes & Mumford, 2012; Mumford et al., 2000).

The four *complex social skills* (categorised as strategic and interpersonal skills under Mumford et al. (2007) framework) are conceptualised below highlighting the context within which the skill is applied. In line with complexity theory, change leaders are facilitators (enabling leaders), not the ones who "know it all" and have no ultimate control over the change process due to their formally designated positions (Jones & Corner, 2012; Uhl-Bien & Marion, 2009).

Figure 7.11.   Clarifying Context Diagram on Social Skills
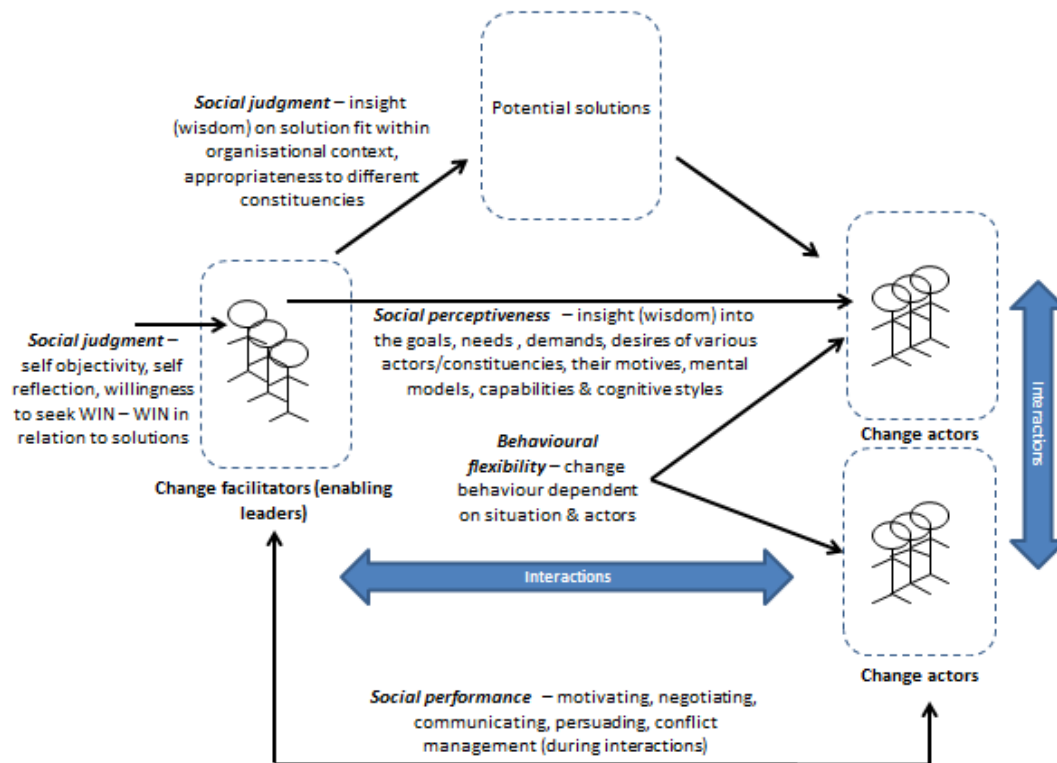
Figure 7.11. Integrates the respective categories, subcategories and codes related to social skills. It is an original conceptualisation depicting engagement between actors and reflection on solutions.

7.4.2.6. Summary – how does correlation (common understanding) emerge?

Thus far the analysis has focused on how to achieve *correlation (common understanding)*. The suggestions from the data are that *correlation* comes about through six causal mechanisms (dynamics). These are themed:

- *"Friends, Romans, countrymen, lend me your ears…" (B1)* – an influence-seeking process resulting from increasing cognitive dissonance between the beliefs of actors. Increasing intrapersonal discomfort drives reaching out to others.

- *"Setting the cat amongst the pigeons" (R3)* – a process which challenges the status quo and increases actor's dissonance by forced exposure to new information.

- *"Getting onto the same page" (R4)* –- a virtuous process that helps actors develop positive sentiments around solving the problem as a result of rich engagement and exposure to complex problem-solving skills. Clarity is obtained on the definition of the problem and differences in positions.

- *"Rushing to solutions" (R5)* – actors jump to solutions rather than clarifying the problem.

- *"Shedding light on the options" (R6)* – a sensegiving process employing solution construction skills to weigh solutions, analyse their pros and cons and consider their appropriateness. Through rich engagement the process leads to common understanding and positive sentiment on the benefits of proposed solution (valence).

- *"Yes, we can…" (R7)* – clarifying the gap and proposing solutions are not enough; getting to common understanding requires people skills. Joint sensemaking is a human endeavour. Engagement and effectively applied social skills foster an interpersonal dynamic that aids in developing common understanding of the problem and the appropriateness of different solutions. This dynamic can operate alongside the clarification of problems and the consideration of solutions.

Through the above dynamics, a deeper understanding is achieved of how *correlation* emerges, drawing on multiple, successive levels of analysis. Thus, starting at the intrapersonal level with individual (personal) level cognitive dissonance and individual level complex change skills, there is a nuanced understanding of how *correlation* emerges through *engagement* (at the interpersonal and group levels).

7.4.3. How does buy in (principal support) emerge?

To depict how *buy-in* is obtained and strengthened, one additional dynamic is added to the dynamics involved in achieving *correlation.*

- *"Together everyone achieves more – 1+1=3"*

As previously noted, *buy-in* (or principal support) is the belief that the formal leaders in an organisation are committed to the success of a change. They serve as opinion leaders who can act as change agents (Armenakis & Harris, 2009).

7.4.3.1.   "Together everyone achieves more – 1 + 1 = 3" – B3

The many *engagements* and interaction over time, led to *correlation* (common understanding) and ultimately to *buy-in* by Steerco members. The engagements and interaction were perceived as positive, constructive and facilitative. Different opinions and ideas were sought leading to positive *correlation* and ultimately *buy-in.* This *buy-in* led to reduction in *cognitive dissonance*.

Evidence of *buy-in* achieved through *common understanding* on the *discrepancy*, the suggested solutions (and *appropriateness* thereof) can be seen throughout the case, as the Steerco engaged more.

As evidence of this *buy-in* achieved through *correlation,* during the 7th Steerco, Joe positioned his preference for Service D; Des facilitated an understanding of why Service C was more appropriate. After some discussion it was agreed that Service C would be the option to go for. Other key decisions were made as well during this session.

> *Gwen: I think we say to the industry that we'd like it (Service C) in immediately. (149:81, 97-97)*

Des captured these agreements in his reflection on the session.
> *[Des thought the meeting went really well. The main reason was that we had achieved decisions on critical outcomes. Some of these outcomes were:*
> - *Steerco agreed that Service C (preferred by Tom and Des) was what we were pushing for.*
> - *They agreed that Service D (preferred by Joe) was not the ultimate goal.*

- *Agreed on interim solutions for example inclusion of Service B with Service A.*
- *Agreed on the way forward for engagement at 3 December session with the industry.*
- *It also appeared that they were beginning to apply their minds to what the next steps would be for example the crafting and changing of legal frameworks.*
- *What was also good was that they were beginning to pick dates for when these things would happen for example targeted milestones by May 2013].(149:230, 286-293)*

The engagement led to *correlation* (*common understanding)* between Nelson, Jack and Gwen and ultimate *buy-in* for pursuing Service C. Once *buy-in* occurs, there is also evidence of reduction in *dissonance*, leading to in this case to action, the decision to move on to consult with the industry, which was a major step forward.

> *[There was comfortability that Service C should be preferred from a policy perspective and that this preference should be emphasised. The meeting ended positively with the Steerco agreeing that Des and Joe set up 2 sessions with the industry]. (134:15, 4-17)*

To portray this dynamic, of how *engagement* over time leads to *correlation*, which causes *buy-in* and a reduction to *cognitive dissonance*, a new balancing loop - (deviation counteracting loop) themed *"together everyone achieves more – 1+1=3" (B3)* is introduced. The greater the *engagements* facilitated in a collaborative manner that builds clarity and addresses core beliefs such as *sentiment on discrepancy, valence* and *efficacy,* the greater the *correlation (common understanding)* on change. This leads to increasing *buy-in* and decreasing intra-personal *cognitive dissonance* (for the actor who started with high levels of cognitive dissonance as a result of *involuntary exposure to new information).*

Figure 7.12.   Together everyone achieves more – 1+1=3
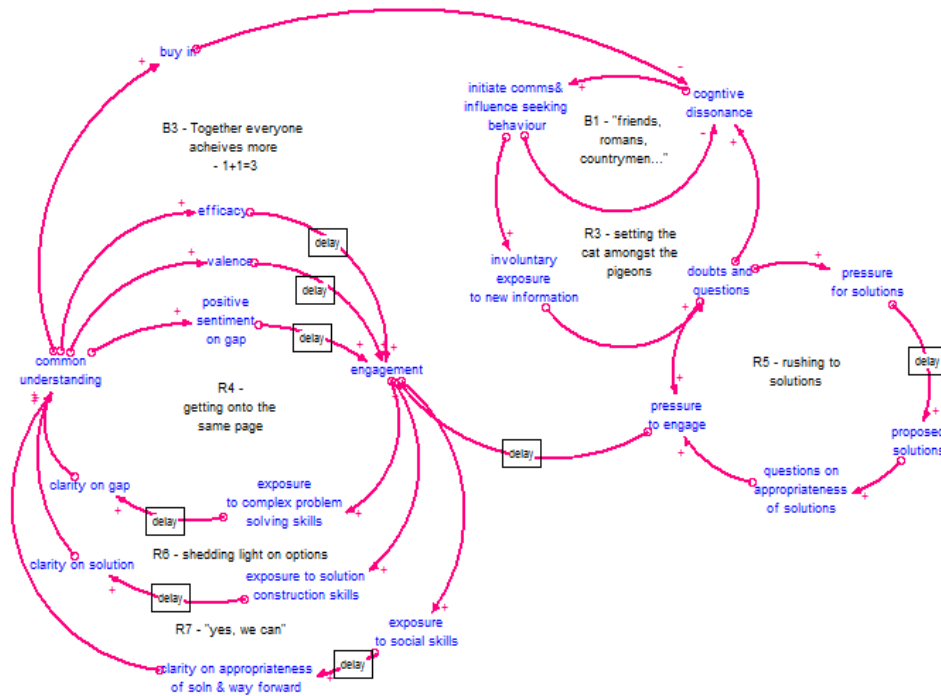
Why does this happen?

Cognitive dissonance is caused when there are competing cognitive elements. Through the process of *engagement* where there is exposure to complex change skills such as *complex problem solving skills, solution construction skills* and *social skills*, *buy-in* is achieved, over time, as a result of reducing or eliminating *cognitive dissonance* through actors either : -

- Changing one or more of the elements involved in dissonant relations

- Adding new cognitive elements that are consonant with already existing cognitions

- Decreasing the elements involved in dissonant relations (Festinger, 1957; Kenworthy et al., 2011)

7.4.3.2.   Summary and meso-level propositions - how does buy-in (principal support) emerge?

The suggestions from the data are that the emergence of *buy-in* can be mapped through seven causal mechanisms (dynamics). The six dynamics previously highlighted in the emergence of *correlation* and one additional dynamic.

- *"Together everyone achieves more – 1 + 1 = 3"* – describes a virtuous dynamic achieved through positive feedback loops and skilled facilitation which tolerates and surfaces different voices. *Buy-in* can be achieved by developing *common understanding* and a reduction to *cognitive dissonance .* Achieving such synergy requires three specific change skills that work together: *complex problem solving skills, solution construction skills* and *social skills*.

From the dynamics involved in understanding the development of *correlation* and *buy-in* the following meso-propositions are advanced. Resonance is the outcome of *correlation* and *buy-in* where coalition actors act in concert as a result of sharing common change beliefs and sentiments. It arises either through a combination of both "cold" (cognitive) and "hot" (motivated) mechanisms.

Proposition 4: The more that other actor's cognitive dissonance increases through forced exposure to new information that challenges the status quo, the more likely a Disequilibrium state will be achieved.

Alternate formulation - proposition 4: The more intense the *"setting the cat amongst the pigeons"* dynamic (R3), the more likely a Disequilibrium state will be achieved.

Proposition 5a: The more actors engage and are exposed to complex problem solving skills, the more they clarify the discrepancy and develop positive sentiment on the gap, and the more actors resonate (develop correlation and buy-in).

Alternate formulation - proposition 5a: The more actors experience the *"getting onto the same page"* dynamic (R4), the more actors resonate.

Proposition 5b: The more actors engage in the change process and are exposed to solution construction skills, the more they obtain clarity on the solutions, develop valence and the more actors will resonate.

Alternate formulation - proposition 5b: The more actors experience the *"shedding light on the options"* dynamic (R6), the more actors resonate.

Proposition 5c: The more actors engage in the change process and are exposed to complex social skills, the more they clarify the appropriateness of solutions and way forward and develop greater efficacy. The greater the efficacy, the more actors resonate.

Alternate formulation - proposition 5c: The more actors experience the *"yes we can"* dynamic (R7), the more actors resonate.

Proposition 5d: The simultaneous exposure to complex change skills is a necessary condition for resonance.

Alternate formulation - proposition 5d: The *"together everyone achieves more dynamic"* is a necessary condition for resonance.

7.4.4. How do meta-aggregates (larger coalitions) form?

As noted, Tom and Des formed an aggregate (coalition). The evidence from the case (presented on how *buy-in* is achieved) highlights that after numerous interactions the Steerco formed a meta-aggregate (larger coalition).

To complete the explanation of how meta-aggregates (larger coalitions) form, an additional link is added to the seven dynamics of how *buy-in* is achieved suggesting that for meta-aggregates to form achieving *buy-in* is necessary. *Buy-in* can increase as a result of positive dynamics such as *"together everyone achieves more"* (i.e. through creating *correlation (common understanding)*.

To present an understanding of how a meta-aggregate develops, the following 11 dynamics are suggested:

- B1- *"Friends, Romans, countrymen, lend me your ears…"*
- R3 – *"Setting the cat amongst the pigeons"*
- R4 – *"Getting onto the same page"*
- R5 – *Rushing to solutions*
- R6 – *"Shedding light on the options"*
- R7- *"Yes, we can…"*
- B3 – *"Together everyone achieves more – 1+1=3"*
- R8 – *"I can see clearly now the rain is gone"*
- B1 – *"Ants in my pants"*
- B2 – *"Two peas in a pod"*
- R2- *"Love is blinding"*

7.4.4.1. "I can see clearly now the rain is gone" – R8

As *buy-in* increases the belief that there is a *perceived discrepancy* increases. This increase in the *perceived gap* is highlighted in the Feb 2013 Steerco session by Jack.

> *Jack: sorry, don't the parties understand that we are trying to move to a situation where we will address the preference servicing issue, strengthen consents and get rid of citizen complaints. Do they not understand that? (186:225, 10-12)*

Jack again demonstrates this increase in the *perceived gap* by strongly motivating for acceptance of Service C in the joint clarification session with the industry in February 2013.

> *Jack: perhaps I'll come in here; but I think something that the parties should realise is that RegCo has decided for these reforms to happen and [it will definitely happen] as you can see. I think what we have to accept is that Service C must be a reality. (199:341, 204-204)*

As previously noted, as *perceived gap* increases, there is an increase to *cognitive dissonance* and a resultant increase to *search for information aligned with belief i.e.* aligned with the sentiment of a *perceived gap* - the "*ants in my pant"* dynamic is triggered. Joe captures this confirmation bias in presenting information on citizen complaints found on a local complaints website, once he bought into the change.

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If anything supports our proposal, it is a quick look at Website X and some of the social websites. If this is the tip of the iceberg (being the few [citizens] that have access to the Internet) - what lies beneath? I have attached a few of the complaints that I found during lunch time.
What is your opinion? (43:5, 1-9)

This dynamic of increasing sentiment on the *perceived gap*, as a result of increasing *buy-in* is captured below and themed – *"I can see clearly now the rain is gone"* (a positive reinforcing loop, R8).

Figure 7.13.   I can see clearly now the rain is gone
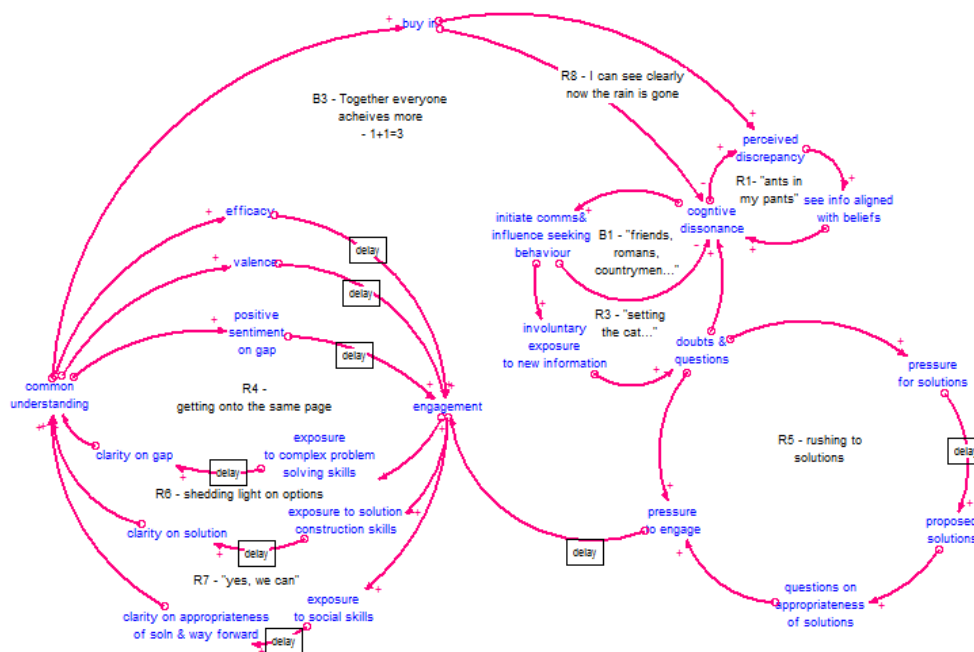
To complete the explanation of how meta-aggregates form – as actors buy-in to the discrepancy/problem (through the "I can see clearly now the rain is gone dynamic") they too seek for confirming information which increases their discomfort with the status quo. As was explained for the dynamic of how aggregates form, as this discomfort (*cognitive dissonance)* increases actors cannot stay in this state. There is an increase in search for those with *shared mental models* and the two dynamics that then play out are "*two peas in a pod"* and "*love is blinding"*, which results in the formation of the meta-aggregate (larger coalition).

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Ultimately the meta-aggregate provides a social support structure for taking the beliefs of the change forward to others. Thus as cognitive dissonance increases processes such as "Friends, Romans, countrymen, lend me your ears" (the beginning of the influence seeking process) and the other dynamics described play out repeatedly. If the increasing engagements surface critical change skills (complex problem solving, social construction and social skills) this would lead to correlation (common understanding) of core change beliefs (positive sentiment on gap, valence and efficacy). Achieving correlation leads to buy-in and increasing sentiment of a perceived discrepancy that has to be addressed, thus bringing more and more people on board.

Figure 7.14.   Causal Summary Map on Formation of Meta-Aggregates
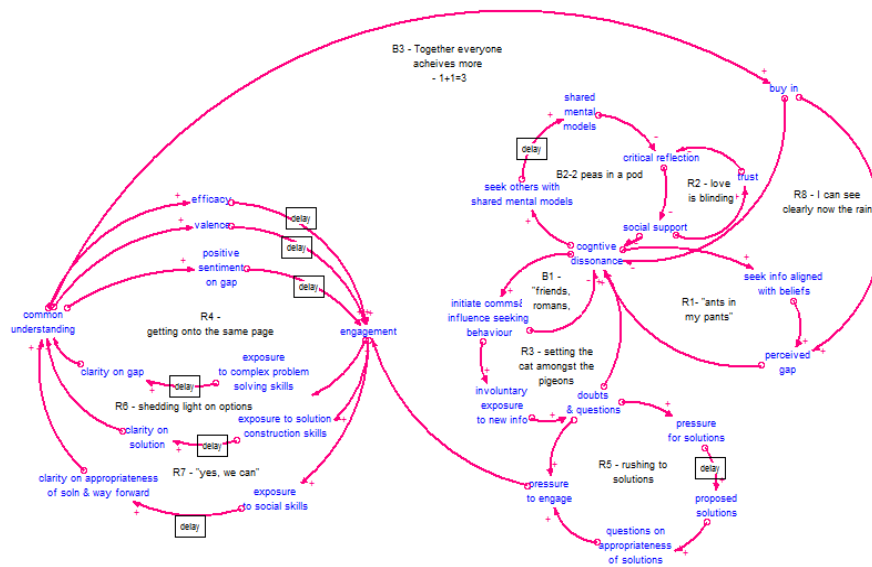
7.4.5. Summary and meso-level propositions – how do meta-aggregates form?

From the dynamics described above, the concluding meso-level propositions to enable disequilibrium conditions are:

Proposition 6: The greater the resonance between initial coalition members, the more the system tends towards Disequilibrium.

Alternate formulation - proposition 6: The greater the *"I can see clearly now the rain is gone"* dynamic (R8 – R1, B1, R3, R4, R5, R6, R7 and B3) the more the system tends towards Disequilibrium.

Proposition 7: Resonance among initial coalition members is a necessary condition in order to achieve a Disequilibrium state.

Alternate formulation - proposition 7: The *"I can see clearly now the rain is gone dynamic"* is a necessary condition in order to achieve a Disequilibrium state.

Proposition 8: The greater the resonance the more that meta-aggregation occurs.

Alternate formulation - proposition 8: The greater the *"I can see clearly now the rain is gone"* dynamic the more that *"a birds in the feather flock together"* dynamic occurs.

Proposition 9: The more meta-aggregation occurs, the greater the intensifying of a Disequilibrium state.

Alternate formulation - proposition 9: The more the *"birds of a feather flock together"* dynamic, the greater the intensifying of a Disequilibrium state.

Proposition 10: The authority (decision making power) of the meta-aggregate is a sufficient condition for the establishment of a Disequilibrium state.

The framework below provides a concluding conceptualisation of the meso-propositions related to the initiation and intensifying of a Disequilibrium state.

Figure 7.15.   Summary Propositions on Meso-Level Theory (Disequilibrium phase)
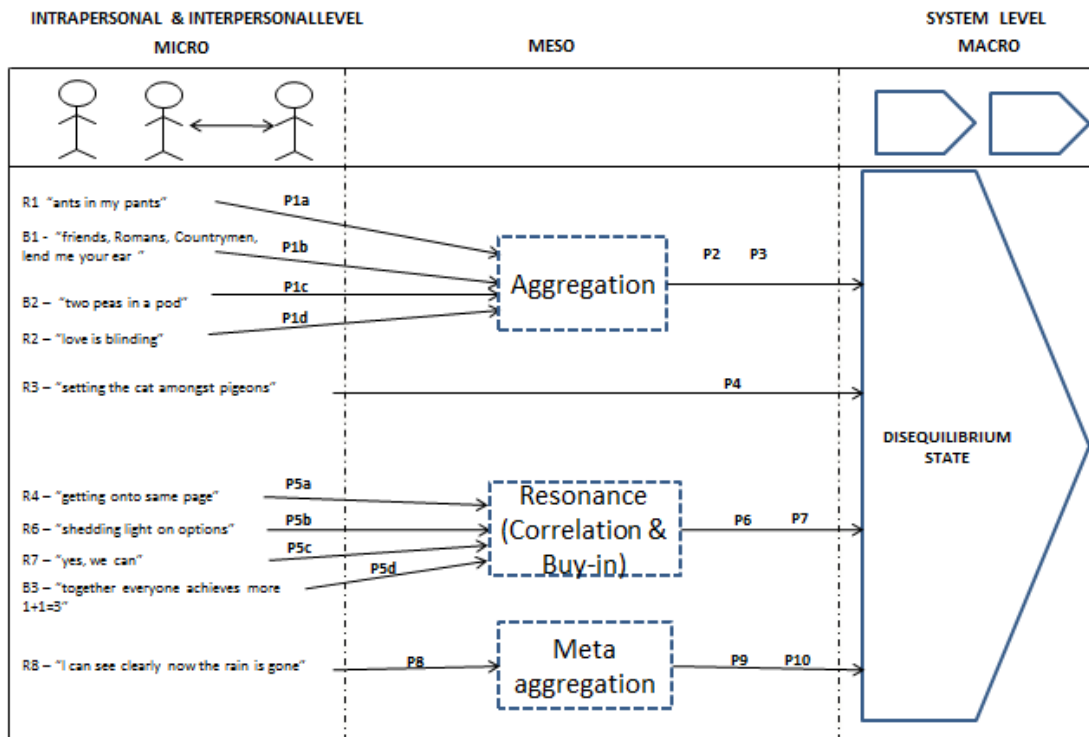
Thus far the dynamics highlighted explain how and why coalitions form, how and why *common understanding* and *buy-in* is achieved and how larger coalitions (meta-aggregates) form. This larger coalition, having now influenced a Disequilibrium state, engages with other actors in an attempt to influence them on the core change beliefs (for example - on the problem/discrepancy and appropriateness of solutions). The next set of sub-questions advance dynamics that occur in the Tension and Threshold phase.

7.5.   How and why does tension and threshold – (phase 2) come about?

The events from the narrative (Chapter 6) helped identify the dynamics that occur during the tension and threshold phase. These include how conflict and mistrust grow; how the threshold event occurs and how buy-in diminishes. These dynamic processes ultimately result in heightened tension and the system pushes back on suggested solutions and experiences self-organisation and emergence.

How and why each of these dynamics occurs is presented by referring to complexity, leadership and dissonance theory.

7.5.1. How does conflict and mistrust emerge?

The Steerco formed into a tightly knit larger coalition (meta-aggregate) through the processes described. As noted, this was achieved through a process of recurring *engagement* and dialogue around the core change beliefs (*discrepancy*, *appropriateness of solutions, valence and efficacy*) and in getting to increased *correlation* and *buy-in* and resonance. However, as different parties and constituencies are exposed to ideas and suggestions of the Steerco; this resulted in increasing disagreement and conflict.

To unpack the dynamic of how conflict emerges, twelve causal loops with categories that emerged from the data are suggested. These are:

- *"Ants in my pants"*
- *"Friends, Romans, countrymen, lend me your ears"*
- *"Setting the cat amongst the pigeons"*
- *" Watering down matters"*
- *"Knickers in a knot"*
- *"Playing the man not the ball"*
- *"Adding fuel to the fire"*
- *"Many heads make heavy work"*
- *"Not singing from the same hymn sheet"*
- *"My way or the highway"*
- *"Command and control"*
- *"Time and tide wait for no man"*

Collectively, these processes can be themed – *"towards the edge of chaos".* For brevity, the dynamics of "*ants in my pants*", "*Friends, Romans and countrymen, lend me your ears*" and "*setting the cat amongst the pigeons*" are not described in detail, as they have been covered before.

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As the Steerco initially bought into the *perceived discrepancy* and the proposed solutions, the "*ants in my pants*" dynamic was created. Information and arguments (capturing three different perspectives – three philosophies) were packaged and sent out to all parties. The arguments reflected the Steerco's perceptions of what the *perceived discrepancy* was. Thus as *cognitive dissonance* increased, Steerco members could not remain in this state and had to act to reduce *cognitive dissonance.* One way to achieve this was to reach out to others (i.e., the "*Friends, Romans and countrymen, lend me your ears*" dynamic plays out). The Steerco thus *initiated communication and influence seeking* processes. The *involuntary exposure to information* caused increased *doubts and questions* and increased the *cognitive dissonance* of other actors approached (through the "*setting the cat amongst the pigeons*" dynamic)*.* The evidence for this from the case was presented before.

7.5.1.1. "Watering down matters" – B4

On *involuntary exposure to information*, different parties and constituencies responded to the ideas set out by the Steerco. Actors' intensified *cognitive dissonance* was evidenced by their attempts to reduce *cognitive dissonance.* As an example, Helena in her DemAlliance response captures how the previous operational servicing related matters have now been addressed; resulting in a lack of understanding of the objective of the exercise.

> *We acknowledge that the invitation for the gathering of information relate to DemAlliance's (previous) communications referred to above, and other information received by RegCo. However, the ultimate objective of the analysis [given the vast improvement in services (21:102, 915-915) is not clear. (21:99, 916-916)*

Further, another actor also *waters down matters* and points out that Helena's letter focused on operational concerns that are now resolved *(21:96, 834-835)*.

Another actor attempts to *water down matters* by pointing out that Project Integrate should receive more focus rather than spending energy on the matters raised in the document.

> *We are busy with the Project Integrate that has the potential to address all the issues raised in this paper. Will it not be more productive to spend the energy of the resources on [this project]? (21:35, 539-539)*

To capture this dynamic a new node *importance of issue* is included in the model. As *cognitive dissonance* increases, the *importance of issue* tabled is reduced by actors who are experiencing *cognitive dissonance*. Reducing the *importance of the issue* decreases *cognitive dissonance.* This is denoted by the balancing (deviation counteracting) loop B4 - *watering down matters*.

Figure 7.16.   Watering down matters

Why does this happen?

The theory of dissonance explains that an effective way of reducing *cognitive dissonance* is by decreasing the importance of the elements involved in the dissonant relations (Festinger, 1957). Further, the presence of the *cognitive dissonance* leads to seeking new information which will provide cognition consonant with existing cognitive elements. Both these *watering down* effects are evidenced in actors stressing that the operational matters have been resolved. The importance of the review is thus brought into question.

The issue of rather focusing on Project Integrate provides evidence of cognitive elements consonant with the actor's view that Project Integrate would take care of all matters in due course; again reducing the *importance of the issue*.

7.5.1.2.   "Knickers in a knot" – B5

Another means of reducing dissonance is actors creating their own interpretation and understanding of the new information they are exposed to. This misinterpretation was evidenced on exposure of new information by the Steerco to the different parties. Some DemAlliance members motivated a reclassification to the Services based on their interpretation.

We request the "authorities" to consider, as a minimum, a request to re-classify Service A as a similar service to Service C (i.e., a service that is as efficient as Service C). By re-classifying Service A as similar to Service C, we are of the opinion that any objections against creating a preferred Service can be justified. (17:9, 54-55)

This misinterpretation is an indication of the presence of *cognitive dissonance* and attempts to reduce *dissonance*.

Even though the above matter was discussed in detail with the DemAlliance member they did not acknowledge their misinterpretation. The engagement was captured in field notes and a reflective memo *(80:11, 2-11)*.

Joe on reviewing the request for reclassification of Service A highlighted the misinterpretation.

Regarding their proposal, my immediate response is to consider whether we wish to give Service A the "same" status as Service C?   To me, our efficiency principle is thrown out of the window and the principle of citizen consent placed first. Some food for thought! (81:4, 7-9)

To highlight this dynamic of reducing dissonance through misinterpretation or misunderstanding of new information, a new node *misinterpretation and misunderstanding* is added to the model. This new balancing loop (B5) is included in the model and themed *knickers in a knot.*

Figure 7.17.   Knickers in a knot
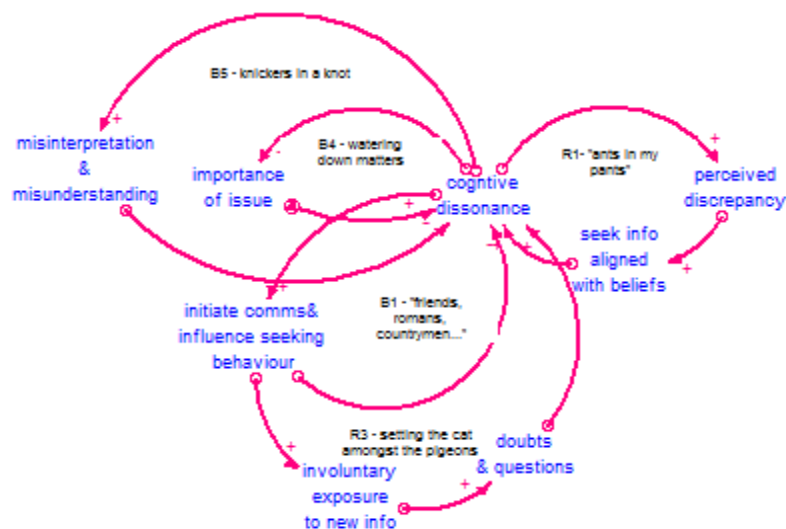
Why does this happen?

The theory of dissonance predicts that forced or accidental exposure to new information (which tends to increase *cognitive dissonance*) will frequently result in *misinterpretation and misperception* of the new information by the person thus exposed, in an effort to avoid a *dissonance* increase. The intent may not be malicious but rather an effort to reduce *dissonance* and maintain consistency with prevailing cognitive elements (Festinger, 1957).

7.5.1.3. "Playing the man & not the ball" – B6

Many of the actors exposed to new information often rejected actors in the process. An actor discredits the Steerco and Working Group by pointing out that they do not have a complete picture of the services.

> *It seems clear from some of the findings and conclusions that the members of both the Steerco and Working Group do not have a full understanding of some of the fundamental elements. (101:3, 1059-1397)*

Other examples of discrediting actors occur during two informal conversations with members from Co1.

In a private informal discussion a party member of ThinkCo noted:

> *ThinkCo member: Come on Des, you'll remember this well. When we were back at [ThinkCo member], this pushing for Service B to be preferred was a pet topic for Tom. He pushed hard then, and hasn't let go of this. This is why this topic has come up again. (373:1, 3-4)*

Similarly in an informal conversation with another actor over coffee, he expressed:

> *Actor: This is all Tom's doing. He fixates on things and doesn't think about the practicalities. We agree with the principles but I tell you there are major matters that we need to consider, which Tom does not understand. We are going to "kill the services" as a result of fixation with following principles and without thinking of actual practicalities. (373:2, 5-6)*

This dynamic is captured under the theme "*playing the man and not the ball*". The dynamic (B6), a balancing loop, highlights that as *cognitive dissonance* increases, *discrediting and rejecting actors* whose beliefs and views differ from one's own, increases. As *discrediting and rejecting actors* increases, *cognitive dissonance* decreases.

Figure 7.18.   Playing the man and not the ball
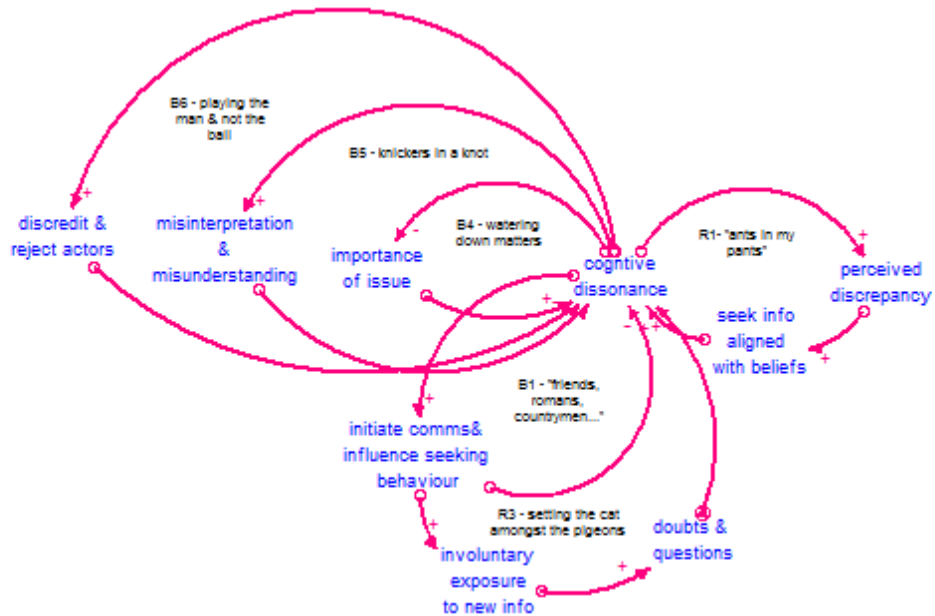
Why does this happen?

The theory of dissonance explains that forced or accidental exposure to new information (which tends to increase dissonance) will frequently result in *discrediting, rejecting or badmouthing* the persons who provide forced exposure to new information or persons who disagree with one's point of view (Festinger, 1957).

7.5.1.4.   "Adding fuel to the fire" – R9

Dissonance reducing behaviours by actors exposed to new information, provide evidence for the heightened levels of *cognitive dissonance*. As *cognitive dissonance* increases; *doubts and questions* increase. This results in a vicious cycle and reinforcing loop, (R10) themed "*adding fuel to the fire*" – that repeatedly fuels increasing levels of *cognitive dissonance*.

Evidence of increasing *doubts* as *cognitive dissonance* increases (observed though continued attempts of "*watering down matters*", getting "*knickers in a knot*"; "*playing the man and not the ball*" dynamic) - was seen throughout the case.

After months of debate, there were still increasing *doubts and questions.* One actor captures this dynamic of increasing *doubt and questions* as a result of increasing *cognitive dissonance.*

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He questions the formulation of the problem statement and the data being used to capture the problem statement. The statistics presented were transparent, legitimate industry statistics, yet the actor raises their *doubts and questions* about the authenticity of such.

> *Actor: thanks chair. I'm more into the problem statement side of things and also considered the statistics that were put up. The concern that I have is around […]. As we are looking at the overall statistics - the comparable sample […] has not been extracted. There are also examples to that end of other countries […]. So the concern is - are we being thorough in deriving at the problem statement. Have we truly dissected […] in order to formulate our problem statement? (199:370, 70-70)*

Similarly Pat's *doubts and questions* surface when she questions what problem is that needs to be solved.

> *Pat: just quickly - what is the problem that we are trying to address?*

> *Des: I'm hoping that's tongue-in-cheek Pat. I'll deal with it when we come back. I'll recap it when we come back.*

> *Des: My sense is that we've gone around this circle many times.*

> *Pat: So what is the problem? […] What you are really saying is this - the problem is let's moves towards [improved] citizen consent. […]. Take Service C out then….. It's as simple as that… and that is why I come to you in confidence and say we need to review the definition of some of the principles. (199:371, 140-149)*

The deviation amplifying loop (R9) – "*adding fuel to the fire*" is highlighted overleaf.

Figure 7.19.   Adding fuel to the fire
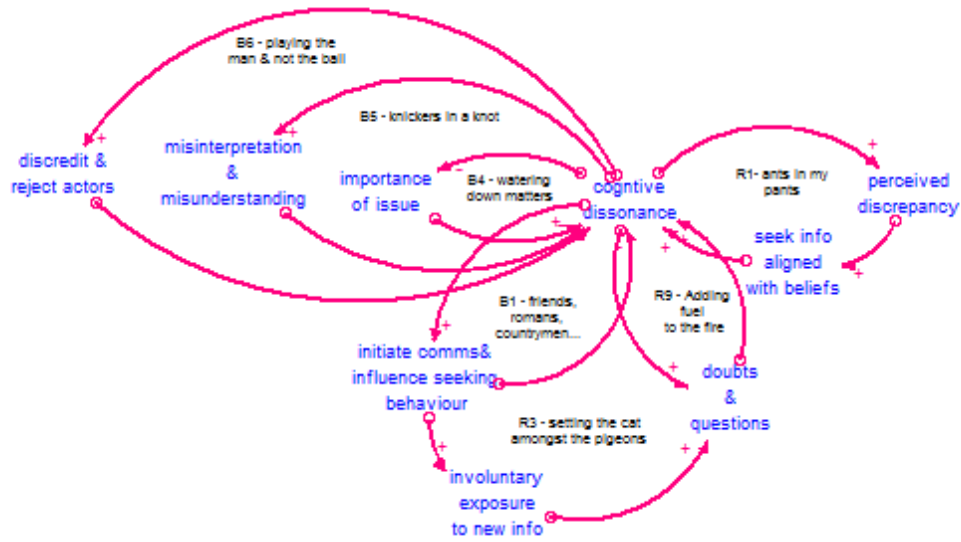
7.5.1.5.   "Many heads make heavy work" – R10

As previously highlighted, as *doubts and questions* increase there is increasing *pressure to engage* which leads to growing *engagement*. As further evidence of this, an actor captures at the ThinkCo session in January 2013, his increasing *doubts and questions* and the increasing *pressure to engage*.

> *Actor: My expectation of today was quite different - I must be honest. What I was expecting to do was answer the clarification questions. I can promise you as I sit at this moment in time, our submission is going to be full of questions. Because we don't understand what is encapsulated in the proposal. I like the concept but with that there are so many questions around practically what it means. (171:72, 78-78)*

> *Actor: Maybe I have not articulated myself very clearly - what we want is an engagement with someone who can explain this model to us. To take us through each step meaningfully. (171:168, 180-180)*

The *pressure to engage* leads to increasing *engagement*. The eventual conclusion of the session was agreement to urgently engage even further.

> *Des: Alright then I tell you what - we're going to book a session as quickly as we can and we will talk you through each piece and articulate all the answers that you are looking for. I get what you're saying. Two hours to get to the point of saying we want clarity on the model. (171:200, 186-186)*

The increasing *engagement* though leads to growing *complexity*. This is well motivated in the complexity theory literature. As the number of agents (N) increases, there are increasing interactions (K) and increasing exposure to different ideas, needs, agendas and mental models (P) which causes greater *complexity* (Schneider & Somers, 2006).

As a reminder, complex systems are different from systems that are merely complicated. If a system can be described in terms of its individual constituents (even if there are a huge number of constituents), it is merely complicated. If the interactions among the constituents of the system, and the interaction between the system and its environment, are of such a nature that the system as a whole cannot be fully understood simply by analysing its components, it is complex (Uhl-Bien et al., 2007). Complexity theory encourages us to see organisations as complex adaptive systems composed of a diversity of agents who interact with one another, mutually affect one another, and in so doing generate novel behaviour for the system as a whole (Uhl-Bien & Marion, 2009). Thus as *engagements* between a diverse set of actors increase, *complexity* grows.

As previously noted, this increase in *complexity* places a demand on the complex change skills required, for example the capacity to clarify problems, to address the appropriateness of the solutions, the capability to address different audiences constructively. This increase in demand for complex change skills, if not met, creates a *skills gap*. This *skills gap* is thus a low level of complex problem solving skills, solution construction skills and/or social skills.

The *skills gap* is a system generated issue; as more actors, with different mental models and needs interact there is an increase in *complexity* which creates a higher demand for complex change skills. These complex cognitive skills though are acquired through experience (Mumford et al., 2000; Mumford et al., 2007). The change at hand however is novel and as more actors join the *engagements* with their own mental models and change beliefs, adding to *complexity*, the stock of complex change skills required to manage such *complexity* decreases (i.e., there is an increase to the *skills gap)*. This *skills gap* surfaces many times across the case, possibly as a result of a lack of experience in managing complex change. An exemplar of the *skills gap* follows.

After multiple engagements with the industry Service C was suggested as a possible solution for consideration. Although there was pushback to previous proposals, the industry appeared to shift their minds in considering the proposed Service C.

> *Actor: Since I got the floor for a second. I just want to congratulate you guys from my side anyways in that I think you really tried to think out-of-the-box to unify something and I think it's bold, and I think for me honestly a bit unexpected and clearly this thing needs to be processed by all of us and it brings a bunch of dimensions. (154:190, 57-57); (154:76, 64-64)*

Other participants echoed the same supportive sentiment.

> *First, thanks, this is a good presentation. It also reflects that what we have submitted has been considered. (155:133, 41-41). In general the first response is that this is a great presentation and suggestion and certainly has huge potential. The concept […] is a super concept and it's something that solves many of the problems. (155:135, 44-44)*

Both industry sessions ended with an understanding that a collective industry discussion to refine the concept would be held under ThinkCo's facilitation.

> *Actor: I think the way you've pulled a "rabbit out of the hat" so effectively that we have a new Service. […]. You've got [I think personally] a kernel that is something - that has a lot of pluses and I really do wonder though whether a workshop some time at the end of January at a conceptual level for the industry to look for refinements […] around this so that we come up with something collective [makes more sense]. My sense is that another couple of weeks on this may just give us something much richer and it's worth thinking about.*

> *Jack: I think we could go with that; you have a structure which is led by Tom in the ThinkCo space. As you know, we're going to be consulting with some other stakeholders. So, I think if it would work for us - all we wanted from this community is to check that the concept would work. So rather than individual input may be a workshop that can give a collective view would work for us.*

> *Jack: We can [conclude] and request ThinkCo to facilitate such a workshop so that we get community input. (154:188, 131-134)*

Whilst the call for industry engagement increased, with the need for seeking clarity as the main goal, Des liaised with Tom to prepare for such an industry session. To his surprise, Tom had a different view on how the session should be run.

> *[Des reminded Tom that they had agreed at the last industry session (3 December) session that ThinkCo would facilitate a discussion with the industry.*

Des's view was that they allow for participants to engage openly on whatever their concerns/issues were. Seeing that they had general positive comments from the 03 December session, this would be a good idea to allow for some constructive debate and input. Des recalled that what the industry was looking for was a joint discussion on issues and a better understanding of Service C. Tom was [uncomfortable]. He believed that the decision was made at the session (to adopt Service C) and did not want to open up debate on the concept or any of the principles. Tom's guidance was that they merely focus on how ThinkCo will govern this initiative more formally at the implementation level.

Des sensed that Tom wanted the industry to steer away from any real debate around the concept. In Tom's mind they had already taken the step towards agreeing that this was the route to go.

On reflection Des believed that the industry was at the right place to really prime meaningful discussion on Service C. Des's view was that once the industry got to jointly unpack the process, people would apply their minds and buy-in to the process by possibly even coming up with better solutions. Shunting this into governance related process and indicating that their role was merely to set up structures for the future, he sensed would break down the process. (166:24, 3-18)

As anticipated, focusing only on governance during the workshop did not work. Participants raised the concern that their expectations on engaging around the concept were not met.

Actor: My expectation of today was quite different - I must be honest. What I was expecting to do was answer the questions [raised]. (171:201, 78-78)

Another actor: I think it's all kind of good going through the implementation process but hear us, hear us… I think we all assume that through ThinkCo and RegCo and in terms of the implementation of this process that all the right [governance structures] will be put into place. It almost feels like we are running into the next steps without […]. (171:202, 100-100)

The above provide evidence of the *skills gap*. There is a lack of understanding of the need to facilitate engagement (K), as the number of actors (N) increase and as *complexity* increases to help in getting to a common schemata or shared mental model (P). This lack of skill in facilitating rich interaction towards a *common understanding* leads to further increasing *doubts and questions.*

Actor: I think we are saying citizen consent is what we can pursue but don't necessarily change the model. (171:203, 101-101)

Another actor: And what's the problem statement because I'm not sure if we all understand or have a common understanding of the problem statement first and then the end goal. (171-193: 108-108)

Actor: If we're clear on the problem that we're trying to solve then we can give meaningful feedback on the proposal and those points weren't clear in the presentation. (171-204, 118-118)

To capture this dynamic, a reinforcing and deviation amplifying loop (R10), themed "*many heads make heavy work*" is included in the model. The dynamic posits that increasing *doubts and questions* causes increasing *pressure to engage,* which leads to increasing *engagement*. As *engagement* increases, *complexity* increases, which places a higher demand for complex change skills. This *complexity* (increasing N, K and decreasing P) causes a growing *skills gap*. This increasing *skills gap* rises *doubts and questions*, as a result of actors not being able to facilitate engagements to make collective sense of for example the problem being addressed. "*Many heads make heavy work*" is a dynamic that advances that *doubts and questions* will continue to increase, as *engagements*, *complexity* and complex change *skills gap* increases.

Figure 7.20.   Many heads make heavy work
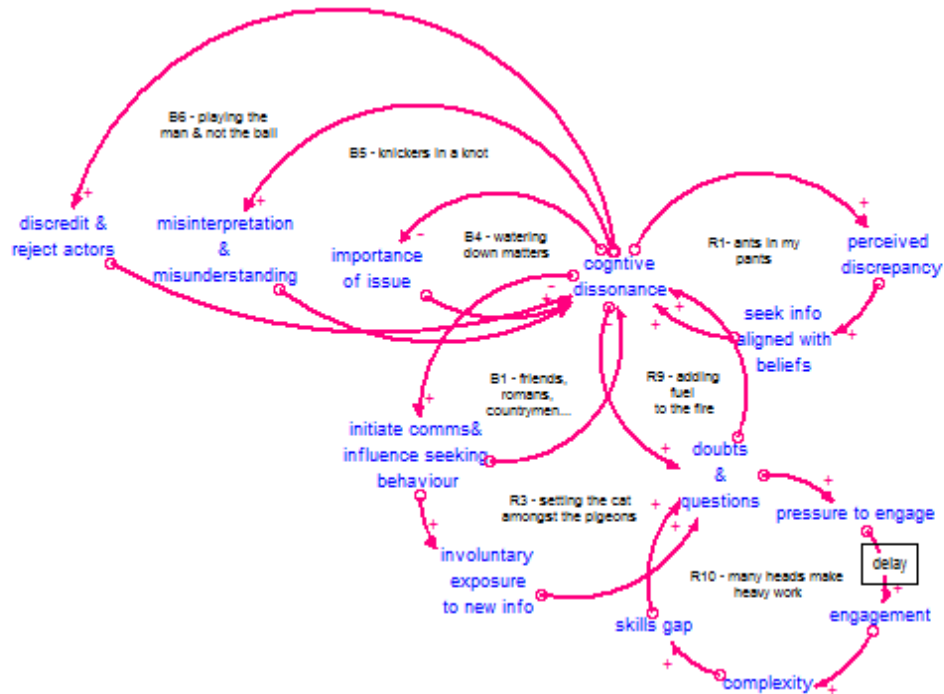
7.5.1.6. "Not singing from the same hymn page" – R11

As *engagement* increased, the *skills gap* grew and became more evident. Different participants presented differing perspectives and the ability to deal with the questions and concerns effectively appeared increasingly challenging.

> *Actor: From a guiding principle's perspective if you rank them – is […] more important to us than […]? Because then maybe if […] is [improved] enough; maybe we can live without [expensive development]. I'm just putting a point out there. If [we agree on this] it will absolutely change the way we think about this.*
>
> *Another actor: Just by putting lipstick on a pig doesn't [not] make it a pig. This is not a […] - it's certainly has […] but it's not […]. Don't pretend that it is something that it's not.*
>
> *Another actor: Exactly, I think we have to be very careful about the interpretation […] and we are very glib in our application of efficiency and when we look at what is required around this service […] but I also think there needs to be place for us to dialogue - is our understanding of this interpretation of this service the same?*
>
> *If I look at this Service C - it's not efficient from a number of factors - the amount of effort required, the feedback loops et cetera.*
>
> *Des: Point noted. (171:205, 36-44)*

Some questions and concerns were overlooked and ignored.
> *Actor: how do you combine Services, as currently we don't do this? (171:49, 52-52)*
>
> *Des: so colleagues, I think we've done a bit of a side turn and just to return then back to the process. To summarise then what we are looking forward to - are the [written] responses back individually. I want to continue - it's not too many slides. (171:61, 64-64)*

Another participant cautioned that if the differing understandings are not resolved we will find it difficult to make progress and meet deadlines.

> *Actor: We agree with the principles, we support the principles, I have no problems with the principles but it's really in understanding the detail of what the proposal entails. How are we going to resolve different understandings? How are you going to answer these questions and make the deadlines? (171:64, 69-69)*

So although participants were raising fundamental concerns, their questions remain unanswered and the stance was that the proposal remained firm.

> *Tom: […] the concept is pretty firm. (171:70, 75-75)*

Some participants still pushed for their concerns to be heard *(171:207, 81-92)*.

Actor: There are more and more questions [in terms of the] practicalities. Just my personal sense is that I'm not sure we can breach the chasm from the proposal and the principles that [are] supported, to having a service on the ground. […] there's got to be flexibility and some agility around […] the practical implementation of this thing. (171:208, 99-99)

Another actor: […] there is a huge amount of work to actually create that Service. Let's not simplify this. That to me is almost feeling like being railroaded […] because it aligns with some principles. I think let's step back from it… to be honest. (171:210, 100-100)

Participants felt that key questions were still left unanswered whilst Steerco members felt that there were answers to all the questions raised.

Tom: I still have the feeling that generally nobody is arguing about the principles. Most of the real concerns are at an implementation, operational and technical level.

Actor: I'm not sure that they are operational and the unintended consequences and unless there is clarity around [these] - there's a whole lot of things that are missing.

Tom: if operationalisation is not done properly there could be unintended consequences. (171:195, 156-161)

After some debate, agreement was reached on how to take this forward. A further engagement was required as many fundamental questions remained unanswered *(171:213, 180-186)*.

To capture this dynamic of how a *skills gap* can cause *conflict*, two new nodes are suggested. The dynamic themed "*not singing from the same hymn sheet*" describes the process: Increasing *skills gap* causes growth to the stock of *unanswered questions*. This in turn increases the *gap in change beliefs* (for example sentiment on the discrepancy being addressed, the appropriateness of solutions or the requisite resources to develop services). This growing *gap in change beliefs* causes increasing *conflict*. As *conflict* increases, the stock of intrapersonal *cognitive dissonance* for actors experiencing the *conflict* increases. This dynamic is highlighted as (R11), a deviation amplifying loop.

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Figure 7.21. Not singing from the same hymn sheet
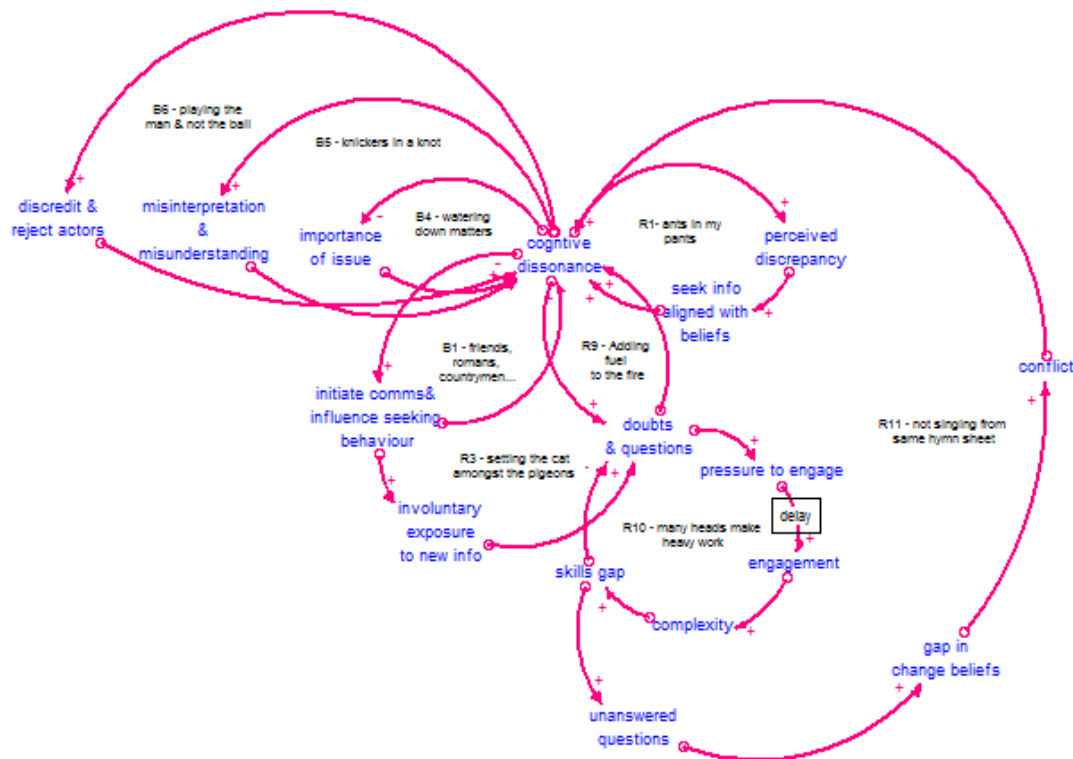
7.5.1.7. "My way or the highway" – R12

RegCo were always of the view that the process was a consultative one. Joe made this clear early in the process in an email to Des.

> *The process will however require a good deal of consultation. (64:7, 17-17)*

Similarly, Nelson re-iterated this preferred consultative approach in the initial industry consultation session.

> *[Nelson also stressed that […] the preference of RegCo was always to consult with the industry. A collaborative approach was valued and will remain the way policy is developed]. (73:36, 2-2)*

Although consultation and a collaborative approach were espoused, as the *engagements* continued and *complexity* increased, the ability to manage differing views and positions became increasingly difficult. The resultant *skills gap* became more evident. Signs of this *skills gap* occurred during the joint industry clarification session during February 2013.

After DemAlliance and ThinkCo members pleaded for further engagements, a joint clarification session was called for.

During the start of the joint clarification session Des pleaded for openness and a tolerance for dissenting views.

> *Des: I make this plea, please stay open, whatever ideas are put up, please stay open to whatever is being presented. And please suspend judgement and we will do the same when you ask questions et cetera. […]. We'll stay engaged in the process. (199:372, 12-14)*

The intent was a good one. However, concerns were once again raised around core change beliefs - what problem was being addressed and the appropriateness of the proposed solutions and principles. Gwen viewed these probing questions as being operational and stemming from self-interest.

> *Gwen: I want to stop you for the moment and just ask this audience to stop talking from your own party perspective. We are looking at a strategic problem and we need to address it. We have been in discussions with the industry for more than two years and to try and look at this problem and I think it's now time for the industry to come together and let's as an industry implement something […]. I would just like to caution everybody to stop thinking about your own party interests, and start thinking about the good of the industry […]. You know my philosophy […]. I'm not trying to make everyone happy and I'm happy if everybody is equally unhappy. (199:150, 127-127)*

With continued debate around the same matters the session reached a heightened level of conflict. The Steerco reached a decision during the coffee break that participants were merely playing games. The Steerco felt that the engagement should be shortened, debate minimised by merely presenting the policy options and participants requested to respond to two policy options only.

> *Gwen: [After tea]…This is now the verdict. We have decided to move the presentation forward and telling you this is the strategic direction RegCo wants to go. We have consulted with you for more than two years. So we would like to present the way forward […] and then I'm going to leave all the nasty questions to Jack. (199:178, 167-167)*

The above presents further evidence of a *skills gap*, highlighting the difficulty in staying engaged and in engaging other concerns, views and perspectives. Participants capture their disappointment with this adopted approach and plead for further engagement and collaboration.

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Participant: Des, Des, what you are asking us to do now? And this surely is isn't the boat to sail on. (199:188, 179-179)

Gwen: We are quite aware of what you are saying. At this point we are making a strategic decision. Thereafter the ThinkCo process will tie up to implementation. We are quite aware of the impact […]. (199:339, 180-180)

Lin: Chairman with all due respect we have a problem with this process. Maybe you should have said that at the beginning of the meeting already. That RegCo has already made the decision and just forcing it upon us and telling us […] because our comments are actually worthless. […] we are curious to understand how this consultation process works. So quite frankly we have a major problem that you're now telling us that the decision has now been made and we are sitting here for no reason. If your goal was, Gwen, respectfully to make sure we are all equally unhappy then you have achieved this goal. You said [Des] this morning we all agreed how critical and how important this initiative is and what we do here in terms of the much bigger picture […] and now you're telling us how you're steamrolling this process without any input. If the majority of the responses tell you that we are not satisfied […] - will you still forge ahead? (199:342, 205-205)

Actually Sir, what you telling us right now and you calling it a consultation but in actual fact you just telling us you forging ahead and respectfully I don't think this is in the interest of the whole. (199:345. 211-211)

Pat: I'm sorry but I think I was very positive before we went out and now suddenly I'm down there somewhere. I think this disconnect comes from […]. (199:352, 235-235)

[…] we thought we were on track until we broke for tea, and suddenly the mat was taken from underneath us. So I would plead that we don't break here […] but that we acknowledge that there is knowledge in the room and that we allow [engagement] to try and come up with a proposal. (199:354, 236-236);

Participant: I really like Pat's view in terms of maybe more collaboration (199:355, 240-240); (199:355, 240-240).

Irrespective of all the pleas for further joint collaboration, the final outcome of the meeting was for participants to put their thoughts in writing and respond to the policy options tabled.

Jack: thanks for that. We will close at this point and I would just like to say that we are waiting for feedback [in writing]. (199:365, 273-273)

To capture the dynamic highlighted above a new reinforcing loop (R12), themed "*my way or the highway"* is introduced. An increasing *skills gap* causes increasing *judgment of other actor's mental models*. Such judgment causes a decreasing *tolerance for other views,* which adds to *conflict*. The increased *conflict* fuels *cognitive dissonance*.

Figure 7.22.   My way or the highway
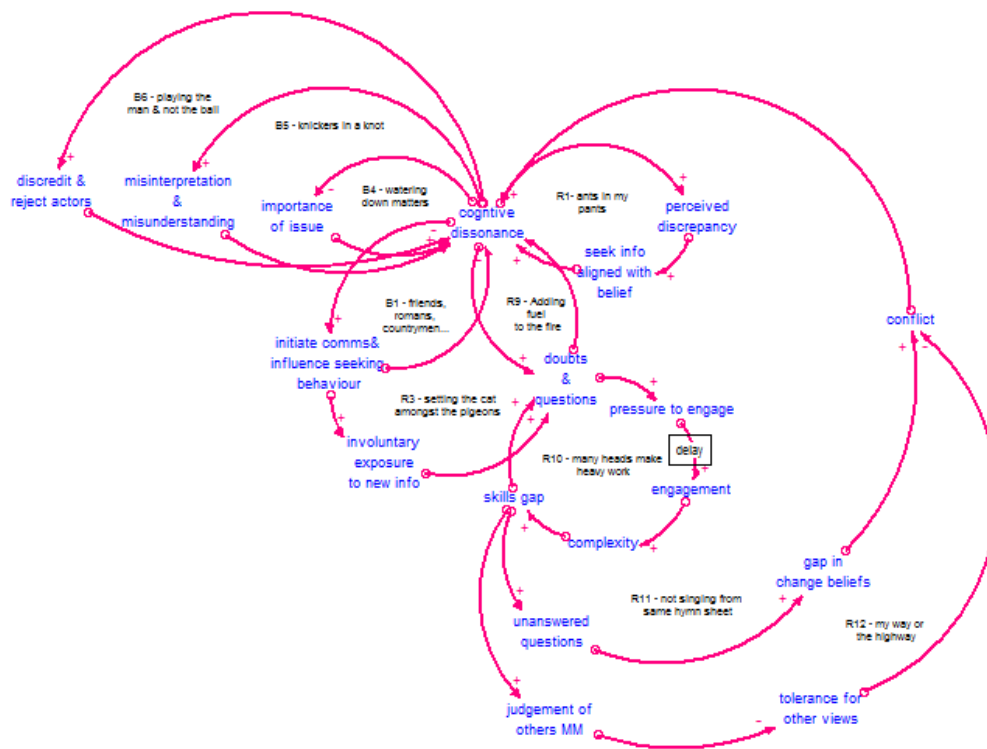
Why does this happen?

In social psychology, the fundamental attribution error or attribution effect, is people's tendency to place an undue emphasis on dispositional (internal) characteristics to explain someone else's behaviour in a given situation, rather than considering situational (external) factors (Jones & Harris, 1967; Ross, 1977).

From a skills based perspective of change, the gap in complex change skills provides an alternative explanation. Higher levels of the cognitive social skills inform, for example, additional reflexivity of one's own position and consideration of others' perspectives (Mumford et al., 2000; 2007). Actors need to make deliberate and conscious effort to adjust their inference by considering the situational constraints (Kahneman, 2011).

With lower levels of social judgement skills (possibly due to situational factors, lack of exposure and experience in such situations) it becomes more difficult for an actor without such skills to take situational factors into consideration and more easily revert to *judgement of others' mental models,* leading to a decreasing *tolerance for other views.*

7.5.1.8. "Command and control" – R13

Actors also become less aware of their own mental models and assumptions they make. A dialogue at the Steerco level in assessing the pushback from the industry surfaces the lack of awareness of change leader's own mental models.

> *Actor: I must say […] maybe I'll just speak in general. We've been through lots of these kinds of projects and we've heard it all before. {Laughter}…. If the horse doesn't want to drink water it's not going to drink. (281:170, 16-16)*
>
> *I think that's my concern with industry consultation, if you don't know how the ThinkCo members work […] the fact is at an operational level they always want to do nothing. Whereas there's always cost pressures - there are always priority pressures, all of those arguments [are driven from] commercial interests. Our view is if you look at the feedback from this initiative - it's exactly the same pattern. (281: 31:22-22)*
>
> *It is almost without fail every initiative at industry level, you get, severe resistance - it is a given. There is no project that we've ever done that has been a smooth ride. Unless you get a force that pushes this into the industry it's going to take forever. […] By and large anything that has an operational impact will be resisted. There will be all kinds of valid and invalid excuses. And so I can go from project to project. You have to force these guys. (281:162, 88-88)*
>
> *[…] and I think this is my concern with this initiative. It is a fact that in the industry you've got a very few strategic level thinkers or policy level thinkers […] the person sitting across the table from you is probably not somebody used to thinking at policy level. (281:173, 83-84). So I think in hindsight, expecting policy level feedback, discussing around the principle, I think it's too much to expect. I know exactly what they saying but I think its rubbish. (281:162, 88-88)*

Some actors also become defensive. There is a sense of achieving the purpose as the actors define it, an emphasis on rationality, a win-lose attitude, a sense of treating one's views as obviously correct, a controlling of the tasks unilaterally and little tolerance for public testing of ideas (Argyris, 1993).

> *Actor: In terms of […] (related to development of the new Service) that's one you could least argue about. I'm probably not going into detail on that. Any of the others we've heard before and we think it's essentially nonsense.*

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The [other] argument I think I have to look at the detail. I don't believe it frankly. But the other three are absolute rubbish. We've interrogated it in detail; there is no [concern]. (281:170, 16-16)

If you look at all the arguments against Service C for example, not one of them holds. There is really nobody that can argue with the principle. […] (281:173, 83-84)

[…] and I'm also worried and I'm concerned about the reputation and the standing of RegCo. I don't want the impression to be created that if you bully RegCo or influence enough then you will throw away your principles. And I think it's very important that RegCo is seen to be above short-term considerations and operational influences. You have to stick to principles and policy level arguments. (281:81, 90-90)

To highlight this dynamic two new nodes are added namely, *awareness of own mental models* and *defensive routines.* The greater the skills gap, the less the *awareness of own mental models* by actors and the greater the *defensive routines*. This leads to increasing conflict and is denoted by the deviation amplifying loop (R14) labelled *command and control.*

Defensive routines are "any policy or action that inhibits individuals, groups, inter-groups, and organisations from experiencing embarrassment or threat and, at the same time, prevents the actors from identifying and reducing the causes of the embarrassment or threat" (Argyris, 1993, p. 15; Jacobs, 2010).

Figure 7.23.   Command and control
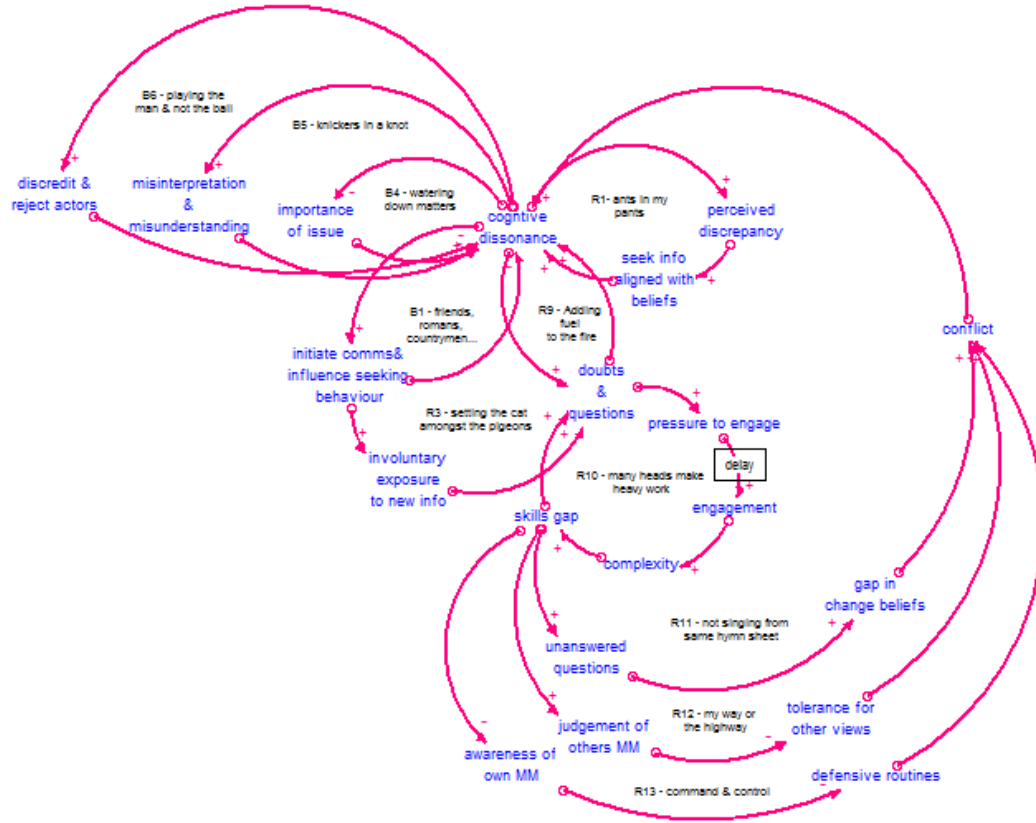
7.5.1.9.   "Time and tide wait for no man" – B7

As previously noted, as *doubts and questions* increase there is an increasing call for further *engagement*. However continued *engagement* creates pressure on time. There is an increasing pressure and need to conclude on matters. This concern about continuing engagement and pressure on time is captured by Gwen in the joint clarification session.

> *Gwen: We have been in discussions with the industry for more than two years and to try and look at this problem and I think it's now time for the industry to come together and let's implement something because as an industry we are not going to move forward. (199:373, 127-127)*

Similarly Jack captures the same increasing concern on time towards the end of the joint clarification session.

> *Jack: I hope that we are not going to start from way back now, because I fear the time [passing]. (199:295, 269-269)*

Jack raises the same concerns about continuous engagement and the increasing time pressure at the last Steerco.

> Jack: I have bounced the concept with [...] just to say [here is progress] because he's seen where we're going [and] we're never getting to the implementation. (281:174, 3-3)

> Jack: We want something that should be implemented pretty soon but probably it shouldn't take more than 18 months. (281:175, 3-4)

This concern about on-going debates and not reaching conclusions decreases the willingness to engage and leads to decreased engagement. As previously noted towards the end of the joint clarification session, although most people were calling for further facilitation and *engagement*, Jack closed the session without creating any further opportunity to engage *(199:295, 269-269);* *(199:375, 270-270; (199:366, 274-277).*

This dynamic is highlighted as (B7), a balancing loop themed *time and tide wait for no man.* As *engagement* increases, there is an increasing *time pressure* which causes decreasing *tolerance for engagement*. This in turn reduces *engagement*. The reduced *engagement* fuels *conflict*. The growing *conflict* causes further *cognitive dissonance*.

Figure 7.24.   Time and tide wait for no man
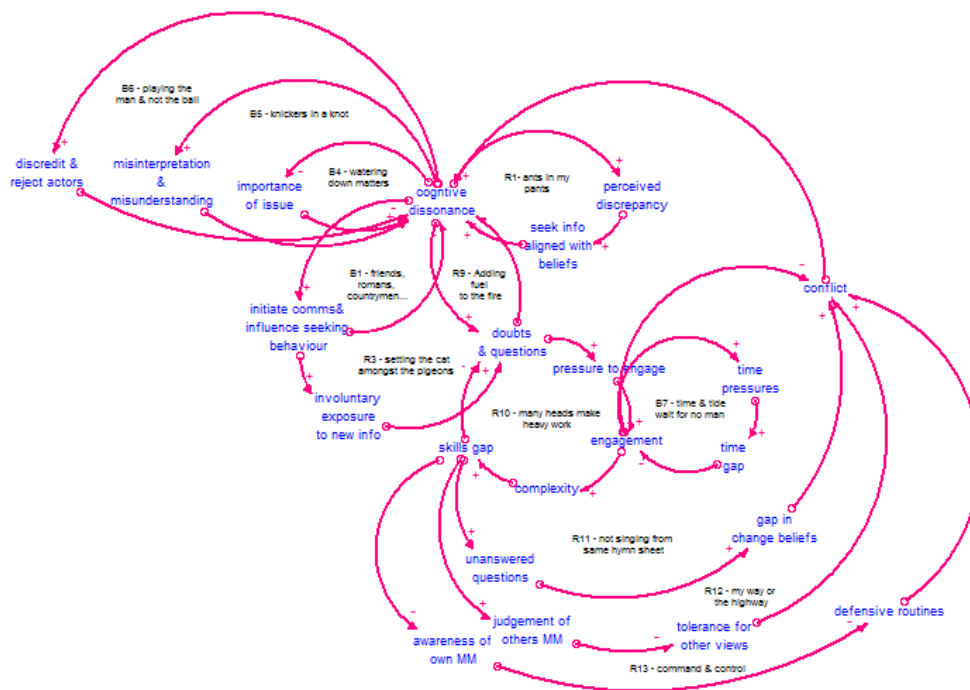
7.5.1.10.   Summary – how does conflict emerge?

Conflict emerges and arises as a result of twelve dynamics. Together they bring the system *"towards the edge of chaos"*.

The twelve dynamics are:

- *"Ants in my pants "*– At the intrapersonal level there is a *perceived discrepancy*, which causes increasing *search for information aligned with beliefs.* This confirmatory bias causes increasing intrapersonal *cognitive dissonance* and the resultant *"ants in my pants"* dynamic*,* a reinforcing vicious cycle.

- *"Friends, Romans, countrymen, lend me your ears"*– As *cognitive dissonance* increases, actors cannot stay in this state and increasingly *seek to communicate and influence others*. This is a means to reduce *cognitive dissonance*.

- *"Setting the cat amongst the pigeons"* – As actors experience *involuntary exposure to new information*, *doubts* are created and intensify, creating increasing *cognitive dissonance* for these actors and the resultant challenging of beliefs on the *perceived discrepancy*.

- *"Watering down matters"* – If the matter is important enough to actors, there is increasing *cognitive dissonance* due to the *involuntary exposure to new information.* To reduce *cognitive dissonance*, actors will seek to downplay the importance of the matter.

- *"Knickers in a knot"* – A further means to reducing *cognitive dissonance,* is to interpret matters based on one's own bias. There is often increased *misinterpretation and misunderstanding* of the new information presented.

- *"Playing the man not the ball"*– Yet another means of reducing *cognitive dissonance* is to *discredit, reject and badmouth actors* who present alternative views.

- *"Adding fuel to the fire"*– As *cognitive dissonance* increases there is an increase to actor's *doubts.*

- *"Many heads make heavy work"*– Actors cannot stay in this state and there is an increasing *pressure to engage.* As *engagement* increases, more actors and increasing alternate views are introduced into the system. There is thus increasing *complexity* and the system places a demand on the stock of *complex change skills (complex problem solving, social construction and social skills* i.e., both task and people skills (strategic and interpersonal skills)). Due to change problem/s being novel and non-routine and the complex change skills required to address these problems developed through experience, as *complexity* increases (increasing number of actors, views and engagements) there is an increasing *skills gap*, which creates the dynamic of "*many heads make heavy work*" - an inability to deal with the increasing *complexity,* leading to rising *doubts and questions*.

- *"Not singing from the same hymn sheet"* – As the *skills gap* broadens*,* there are increasingly *unanswered questions* and a resultant increase to the *gaps in change belief* which builds *conflict.*

- *"My way or the highway"* – The increasing *skills gap* also causes actors to *judge other actors mental models,* which causes a decreasing *tolerance for other views* and fuels *conflict.*

- *"Command and control"* – The *skills gap* also causes actors to remain *unaware of their own mental models* and adopt *defensive routines* which also furthers *conflict*.

- *"Time and tide wait for no man"* – As *engagements* increase there is a build-up of *time pressure,* causing decreasing *tolerance for engagement* and results in reduced *engagement.* Decreasing *tolerance to engage* and reduced *engagement* causes increasing *conflict.*

- *"Towards the edge of chaos"* – As *conflict* heightens, *cognitive dissonance* increases and a vicious cycle gets reinforced, creating extreme tension in the system and heightened *cognitive dissonance* within actors.

Before presenting a summary of meso-propositions, evidence bearing on how *mistrust* increases and *buy-in* diminishes is presented.

7.5.2. How does mistrust emerge?

One additional dynamic is advanced to the twelve dynamics highlighted for the build-up of conflict.

7.5.2.1. "Something smells fishy" – R14

As *conflict* increases through the dynamics of "*not singing from the same hymn sheet", "my way or the highway", "command and control*" and *"time and tide wait for no man",* actors who have differing change beliefs, whose voices are not being heard due to a decreased tolerance for other views, who experience defensive routines or whose requests for engagement fall on deaf ears, tend to increasingly perceive hidden agendas and game-playing.

The perceptions of hidden agendas and game playing were evidenced in the February 2013 joint clarification session.

> *Actor: I'm just grappling with something with regard to deadline and for the industry to seriously have considered the options on the table and for people that have a lot of experience - not only from the ThinkCo members but from DemAlliance as well, to highlight concerns and ideas and suggestions that we have with regard to the proposal. I get the feeling that that I may as well go back and throw my response in the dustbin [...]. Nobody is concerned about the work that we as an industry have been working on [...] and I'm not 100% sure if I am the only one in the room that gets that feeling. (199:340, 203-203)*
>
> *Another actor: So quite frankly we have a major problem that you're now telling us [...]. If your goal was, Gwen, respectfully to make sure we are all equally unhappy then you have achieved this goal. (199:376, 205-205)*
>
> *Pat: I'm sorry but I think I was very positive before we went out and now suddenly I'm down there somewhere. (199: 377, 235-235). We thought we were on track until we broke for tea, and suddenly the mat was taken from underneath us. (199:378, 235-235)*
>
> *Actor: I'm a bit surprised that the Steerco [...]. Some of us came here with the expectation that [...]. (199:347, 214-214)*

To capture this dynamic, a new node is introduced namely *perception of hidden agendas and game playing.* The dynamic is highlighted as a reinforcing (deviation amplifying) loop, (R14) themed – "*something smells fishy*". As *conflict* increases, the *perception of hidden agendas and game playing* increases. As this perception increases, *trust* decreases and this adds to *conflict*.

Mistrust thus emerges due to increasing *conflict* and increasing *perception of hidden agendas and game playing* between actors. The perception of hidden agendas and game playing arises as a result of actors saying one thing but doing another.

Figure 7.25.   Something smells fishy

7.5.3. How does buy-in diminish?

To explain how *buy-in* diminishes, thirteen causal loops are suggested. One additional linkage (*"No dice!"*) is added to the thirteen dynamics that cause growing *conflict* and *mistrust*.

- *"Ants in my pants"*
- *"Friends, Romans, countrymen, lend me your ears"*
- *"Setting the cat amongst the pigeons"*
- *"Watering down matters"*
- *"Knickers in a knot"*
- *"Playing the man, not the ball"*
- *"Adding fuel to the fire"*
- *"Many heads make heavy work"*
- *"Not singing from the same hymn sheet"*
- *"My way or the highway"*
- *"Command and control"*
- *"Time and tide wait for no man"*
- *"Something smells fishy"*
- ***"No dice!"***

7.5.3.1.   "No dice!" – R15

Jack was clear during the clarification sessions in early 2013 that the expectation from the Steerco was to go with the proposed Service C.

> *Jack: As you know we have proposed a new Service C - the concept should still be around that. (199:303, 3-3)*

> *Jack: However, ideally what we have on the table is a proposed new Service C, that we have communicated upwards and we are communicating with you today. (199, 379, 273-273)*

Although *buy-in* was pursued from all parties for the new proposed Service C, seventeen out of twenty constituencies opposed the Service C proposal. This came through clearly in the written responses.

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The proposal is a fairly radical departure from current services, and certainly has many points of merit on paper, but as with any such proposal, a detailed analysis is required in order to unpack and understand the consequences and impacts on services as a whole. (214:56, 6-6)

We are not sure that the proposed Service C addresses any significant risk issues, but will certainly create major complexity for all parties in terms of implementation, on-going administration and maintenance. (241:58, 22-22)

We therefore concur with the response document of DemAlliance that Service C, as presented is not acceptable. (218:16, 21-21)

The proposed Service C, in its current design, has many inherent flaws and is not acceptable to Alliance4 members. (219:7, 51-51).

The majority of ThinkCo members were also not in support of Service C.

With regard to Service C itself, we remain reserved in its assessment. As indicated, we fully support the principles and intent on which it is based but are concerned of the impact of a highly complex proposal which becomes dependent on the simultaneous alignment of a complex ecosystem with citizens who are only now coming to understand their rights. (227:21, 1925-2297)

As to whether Service C will see any improvement to the root cause of the problem is arguable. (214:59, 23-23)

The suggestion is that the overwhelming lack of *buy-in* is as a result of the dynamics presented which causes heightening of *conflict* and *mistrust*. These dynamics cause decreasing *buy-in*. The node *conflict* is thus linked to *buy-in* and denotes a reinforcing (deviation amplifying loop, R15, "*No dice!*"). As *conflict* increases, *buy-in* decreases. As *buy-in* decreases *cognitive dissonance* increases.

Figure 7.26.   No Dice!
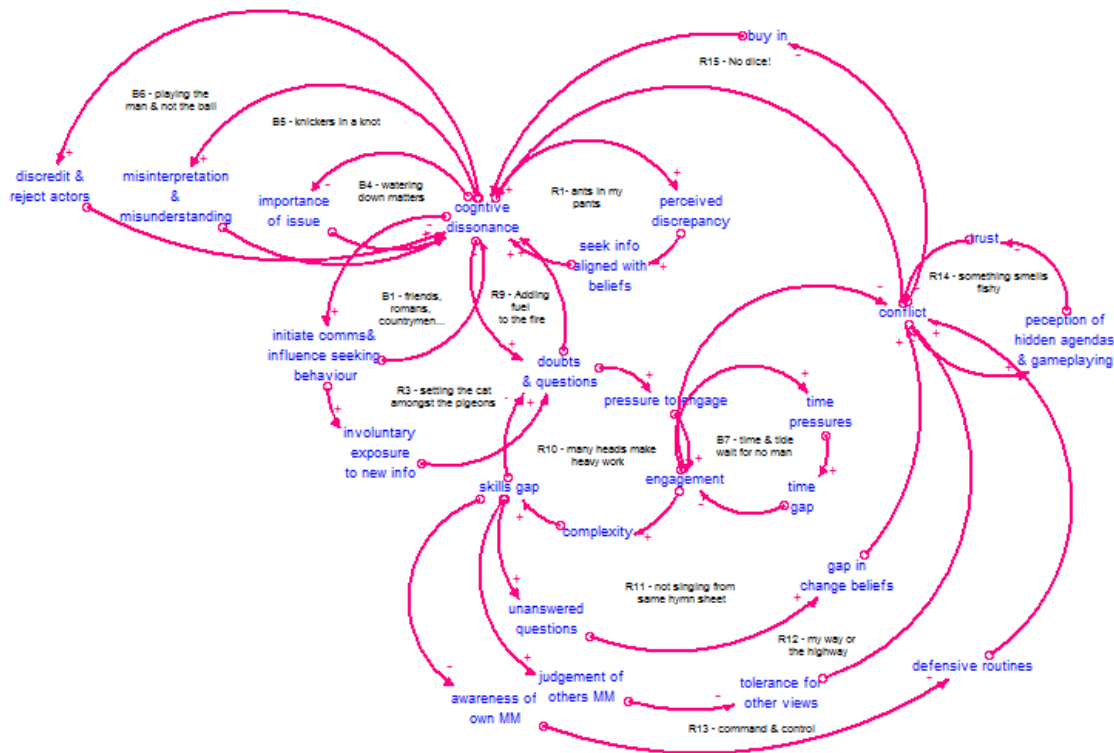
7.5.4.   Summary of meso-level propositions – how does conflict and mistrust emerge?

From the above dynamics, the following meso-level propositions are advanced. Disharmony is conceptualised as the meso-level outcome arising from growing conflict and mistrust and diminishing buy-in.

Proposition 11a: The greater the cognitive dissonance, the more actors reduce the importance of the information they are exposed to, the more doubts and questions on core change beliefs grow.

Alternate formulation - proposition 11a: The greater the cognitive dissonance, the more the *"watering down matters"* dynamic (B4) will be observed, the more the *"adding fuel to the fire"* dynamic (R9) intensifies.

Proposition 11b: The greater the cognitive dissonance, the more actors misinterpret and misunderstand information they are exposed to, the more doubts and questions on core change beliefs increase.

Alternate formulation - proposition 11b: The greater the cognitive dissonance, the more the *"knickers in a knot"* dynamic (B5) will be observed, the more the "*adding fuel to the fire"* dynamic (R9) intensifies.

Proposition 11c: The greater the cognitive dissonance, the more actors badmouth, discredit and reject actors who present the new information, the more doubts and questions on core change beliefs increase.

Alternate formulation - Proposition 11c: The greater the cognitive dissonance, the more the "*playing the man and not the ball"* dynamic (B6) will be observed, the more the *"adding fuel to the fire"* dynamic (R9) intensifies.

Proposition 12: As cognitive dissonance of actors increases, the more likely disharmony will be reached.

Alternate formulation - proposition 12: As the *"adding fuel to the fire"* dynamic intensifies (R9), the more likely disharmony will be reached.

Proposition 13a: As doubts and questions on the core change beliefs increase, the more engagements increase, the more new actors and their needs are brought into the process. As new actors and their needs increase, the greater the complexity and the greater the change skills gap. As the skills gap increases, the greater the shift towards disharmony.

Alternate formulation - proposition 13a: The more the *"many heads make heavy work"* dynamic (R10) grows, the more the shift towards disharmony.

Proposition 13b: The greater the change skills gap, the more actors' questions remain unanswered, the greater the gap in change beliefs, the greater the conflict. The greater the conflict the more the system tends towards disharmony.

Alternate formulation - proposition 13b: The more the *"not singing from the same hymn sheet"* dynamic (R11) increases, the more the system tends towards disharmony.

Proposition 13c: The greater the change skills gap, the more actors judge other actors mental models and the less tolerance for other views, which grows conflict. The greater the conflict the more the system tends towards disharmony.

Alternate formulation - proposition 13c: The more the *"my way or the highway"* dynamic (R12) increases, the more the system tends towards disharmony.

Proposition 13d: The greater the change skills gap, the less actor's awareness of their own mental models, the more they exercise defensive routines. The greater the defensive routines, the greater the conflict. The greater the conflict the more the system tends towards disharmony.

Alternate formulation - proposition 13d: The more the *"command and control"* dynamic (R13) increases, the more the system tends towards disharmony.

Proposition 13e: As engagements increase, time pressure increases and change leader's tolerance to engage decreases. As tolerance to engage decreases, the greater the conflict. The greater the conflict the more the system tends towards disharmony.

Alternate formulation - proposition 13e: As the *"time and tide wait for no man"* dynamic (B7) increases, the more the system tends towards disharmony.

Proposition 13f: As conflict increases, the greater the perception of hidden agendas and game-playing, the lower the trust and the greater the conflict. The greater the conflict the more the system tends towards disharmony.

Alternate formulation - proposition 13f: The greater the *"something smells fishy"* dynamic (R14), the greater the conflict, the more the system tends towards disharmony.

Proposition 14: The greater the disharmony, the more the system will tend towards a tension and threshold condition.

Alternate formulation - proposition 14: As the *"towards the edge of chaos"* dynamic intensifies though the dynamics (R9, R10, R11, R12, R13, B7 and R14), the more the system tends towards a tension and threshold condition*.*

Proposition 15: Heightening disharmony is sufficient for the system to tend to a tension and threshold condition.

Proposition16a: Disharmony is a necessary condition for new meta-aggregates to form.

Proposition 16b: The formation of new meta-aggregates pushes the system towards a tension and threshold condition.

The framework in Figure 7.27 provides a concluding conceptualisation highlighting the meso-level propositions related to the development of the tension and threshold phase.

Figure 7.27.   Summary propositions on meso-level theory (Tension and Threshold)
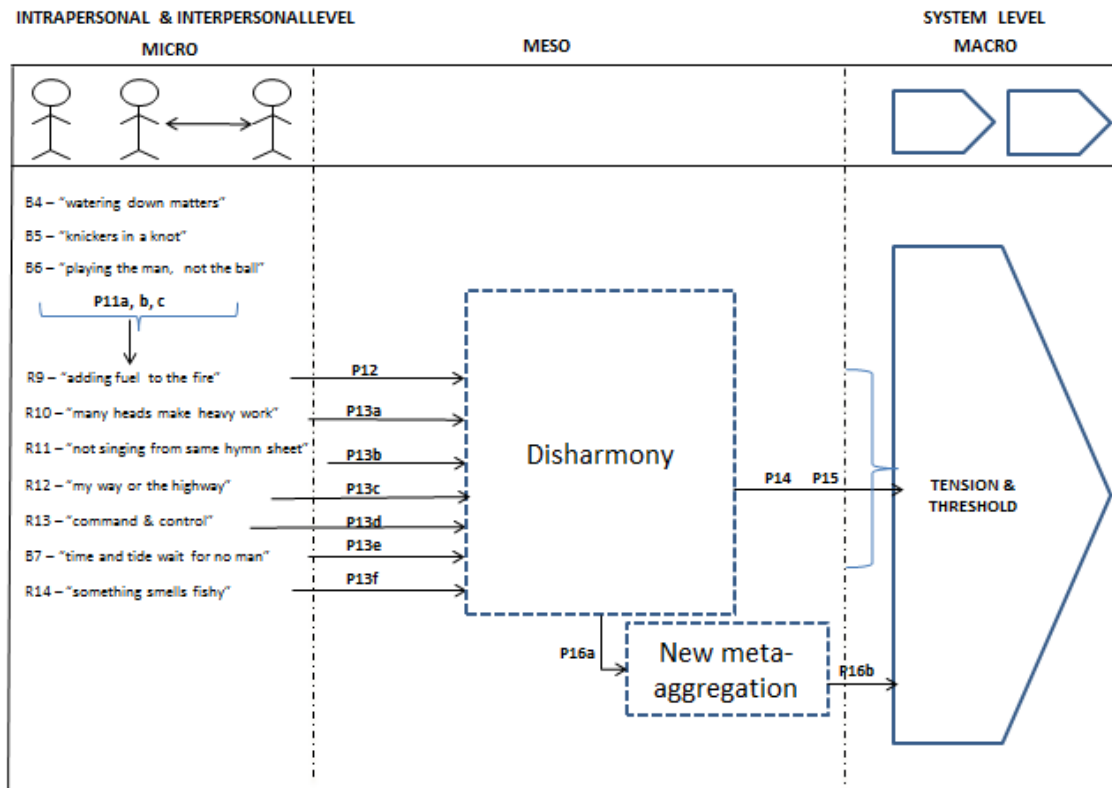
As the system reaches intensified tension, culminating in a threshold event, the system is primed for the emergence of new ideas, solutions and merging of new coalitions. The change process enters the third phase.

7.6.   How and why does emergence (amplifying actions phase 3) come about?

The events from the narrative (Chapter 6) helped identify the dynamics that occur during the recombination/self-organisation phase. These include how satisficing occurs, how entanglement emerges and how new coalitions form. These dynamic processes ultimately result in emergence of new solutions and coalitions. How and why each of these dynamics occurs is presented by referring to complexity, leadership and dissonance theory.

7.6.1. How and why does entanglement emerge?

Entanglement has been noted as an important process in enabling change and emergence. Entanglement refers to a dynamic relationship between the formal top-down, administrative forces and the informal, complex adaptive emergent forces in organisations (Uhl-Bien & Marion, 2009). Some research has been conducted on for example strategies used by enabling and administrative leaders, however unbundling how and why entanglement emerges from context specific longitudinal research requires additional attention (Nooteboom & Temeer, 2013).

To put forward how and why entanglement occurs, the dynamics for how *buy-in* diminishes are used. These dynamics provide good context for how and why entanglement occurs. The dynamics are:

- *"Ants in my pants"*
- *"Friends, Romans, countrymen, lend me your ears"*
- *"Setting the cat amongst the pigeons"*
- *"Watering down matters"*
- *"Knickers in a knot"*
- *"Playing the man not the ball"*
- *"Adding fuel to the fire"*
- *"Many heads make heavy work"*
- *"Not singing from the same hymn sheet"*
- *"My way or the highway"*
- *"Command and control"*
- *"Time and tide wait for no man"*
- *"Something smells fishy"*
- *"No dice!"*

Added to these fourteen causal loops are three feedback loops namely:

- *"A bird in the hand is worth two in the bush"* and previously described,
- *"Two peas in a pod"*
- *"Love is blinding"*

7.6.1.1. "A bird in the hand is worth two in the bush" – B8 - (how and why satisficing occurs?)

As *conflict* and *mistrust* grow, *buy-in* decreases and *cognitive dissonance* increases. This increase in *cognitive dissonance* does not only occur for change recipients but also to change leaders. The increase to change leader's *cognitive dissonance* is evidenced as the system reaches the "*edge of chaos*" with heightened *conflict, mistrust* and low levels of *buy-in,* resulting in intensified system wide disharmony.

On reviewing the written feedback from the industry and noting the low level of support for Service C, both Des and Joe began posing alternate solutions. Des positioned a new Service W (allowing for both Service C and Service D to co-exist) whilst Joe reaffirmed his preference for Service D only. In an email to Joe, Des reflects his change of thinking.

> *I'm done with the analysis on my side. This has been most interesting! I would like to catch you during the week for a discussion. My view is that we could possibly get to a win-win for all parties. The Steerco though may not be happy with the conclusion? Can't wait to share thoughts. (236:2, 3-9)*

Similarly Joe in an email to Des supports seeking a revised position more acceptable all parties.

> *We must however strive for the win-win situation, even if we have to soften our stance. We need to get all parties to buy-in and create synergy. (272:2, 30-30)*

Des attempted to convince Tom and Oliver of a change to the proposed solution in order to accommodate all parties. After attempting to do so, Tom remained unconvinced in moving from preferring Service C to allowing for both Service C and D to be offered jointly. Des captured his thoughts in a memo after the first failed attempt at convincing Tom.

During the 2nd last Steerco, the issue of the industry not supporting Service C came up and Jack captured if it would not make sense to reduce the requirements, consider the available alternatives, and go with a solution acceptable to the majority of parties.

> *Jack: Given that respondents were not in support of Service C, would it not make sense to compromise, seeing that both processes are so similar. That if we indicated that we could just put both together Service C and D - would we not get the industry to move and support this?*

Gwen: I support this view. Would it not be a WIN-WIN?

Des: If the committee feels that this is the way to gain momentum with the industry, then this is what we must do. (257:42, 51-53)

Jack also captures the need to compromise and go for minimum requirements at the last Steerco.

Jack: What we are going to present is that even though we could have built a Rolls-Royce we are willing to settle for less for as long as it addresses the key of what we're trying to address. (281:176, 15-15)

To capture the dynamic described above a new node *satisficing* is introduced. Optimal decision making is an approach that specifically attempts to find the best alternative available. *Satisficing* on the other hand, is a decision-making strategy or cognitive heuristic that entails searching through the available alternatives until an acceptability threshold is met (Simon, 1991; Colman, 2006).

To highlight this dynamic of a reduction to expectations and requirements, a new balancing causal loop, (B8), themed *a "bird in the hand is worth two in the bush"* is introduced. As *cognitive dissonance* increases (as a result of a lack of *buy-in*, stemming from increasing *conflict* and *mistrust*), there is growing *doubt*. Such *doubt* causes increasing *satisficing* and ultimately reduces *cognitive dissonance*.

Figure 7.28.   A bird in the hand is worth two in the bush

Why does this happen?

Cognitive dissonance theory postulates that in situations where decisions are made, post-decision dissonance arises. Post decision dissonance can increase as the attractiveness of the unchosen alternatives increases (Festinger, 1957). In this case, the unchosen alternative (Service D) is strongly supported by the majority of actors, thus increasing *doubt and questions* about the selected alternative (Service C). Further, a means of reducing post-decision dissonance is to perceive some characteristics of the chosen and unchosen alternatives as identical (Festinger, 1957).

> *Jack: would it not make sense to compromise, seeing that both processes are so similar. (257:42, 51-53)*

Thus as a result of the Steerco making the decision to support the creation of Service C and remove all other Services, post-decision *dissonance* increased as a result of the attractiveness of the unchosen alternative increasing (due to the strong support for the unchosen alternative). This growing *dissonance* creates increasing *doubt.* Growing *doubt* increases *satisficing* which aids in reducing *dissonance.*

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7.6.1.2. "Two peas in a pod" – B2 and "love is blinding" - R2

Once *doubt* increases and there is increased *satisficing*, to reduce *dissonance* even further, actors *seek for others with shared mental models.* The *"two peas in a pod"* and *"love is blinding"* dynamics are thus triggered. This is the essence of how entanglement emerges and these engagements happen informally. In a tele-conversation before the last Steerco Joe informed Des of informal sessions that took place between RegCo and the different parties. Des and Tom (i.e., remaining members of the Steerco) were not included in these sessions.

> *[Joe indicated that he needed to bring Des up to speed with his latest thinking. He didn't want Des to get "caught by surprise" at the Steerco. He noted that much had changed from the last time they chatted. He also indicated that they journeyed along on this and he thought it not proper if he didn't share this ahead of time.*
> *Joe indicated that there were a few internal sessions to debate the policy options. He also pointed out that there were a few 1-1 sessions with select parties. The main outcome was that Service C was not supported. (279:38, 8-9)*

Jack confirmed the separate informal meeting with parties at the last Steerco. This was evidence of entanglement. Whereas RegCo was formally seen as the administrative bureaucracy, it was RegCo that initiated the informal engagements and facilitated the process as enabling actors to allow for bottom up emergence of solutions. ThinkCo on the other hand played the administrative leadership role. This is evidence that those in positions of power can be enabling leaders. Enabling leaders possess the requisite change skills to know when to change their own behaviours.

> *Jack: As part of this process just something that I need to highlight after we met as the Steerco and agreed on this mandate; we also met with some parties informally.* To *say - we are sensing some pushback on what is being proposed. We want to understand the issues. And out of those interactions we picked up a similar message to at least implement Service D. Service C will not work - that is almost consistent. We don't see any pushback for implementing Service D. (281:7, 5-5)*

As *"a bird in the hand is worth two in the bush"* dynamic plays out, and there is growing support for an alternative that actors can live with - the *"two peas in the pod"* and *"love is blinding"* dynamics are evidenced. There is an informal mobilising and bonding of commonly minded actors and a separate meta-aggregate emerges – a *"birds of a feather flock together"* dynamic is observed.

Figure 7.29. **Birds of a feather flock together**
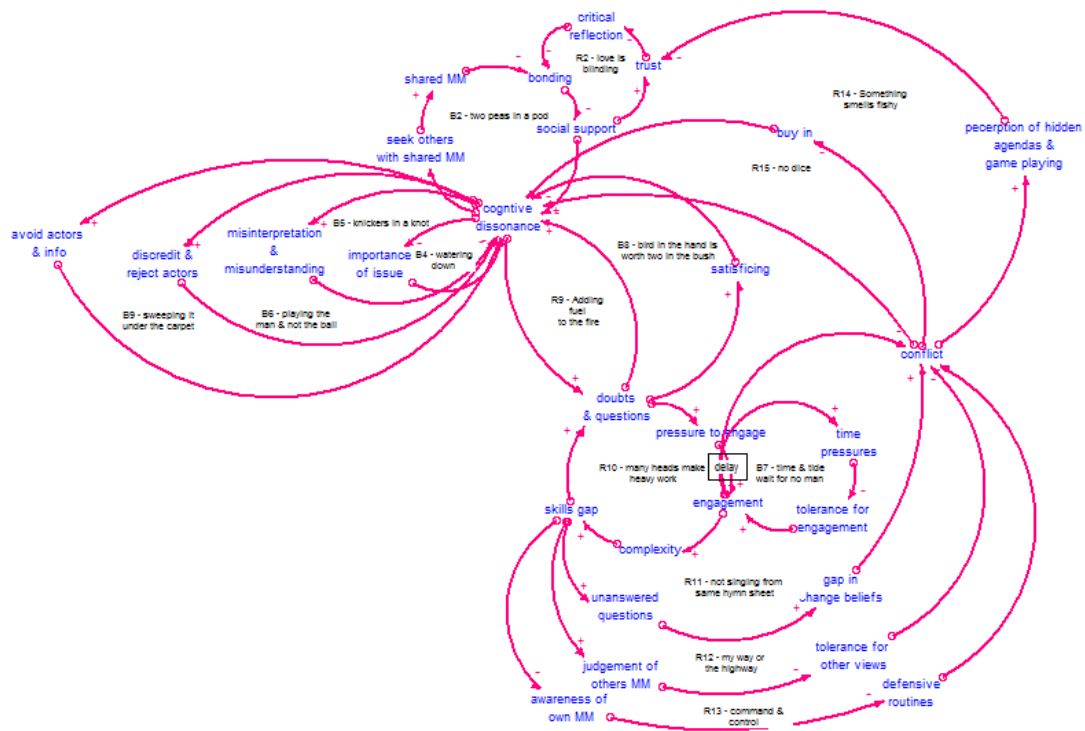
7.6.1.3. How does buy-in emerge? (alternative explanations)

To complete the loop, *buy-in* was previously described as emerging out of seven causal mechanisms (dynamics). The six dynamics previously highlighted in the emergence of *correlation* and an additional dynamic namely "*together everyone achieves more – 1+1=3"*. Getting *buy-in* was described mainly as a result of positive *engagement* and through exposure to complex change skills over time.

From the dynamics described in terms of *entanglement* emerging, *buy-in* can also be achieved through dynamics such as increasing *conflict* and *mistrust*. As entanglement increases there are compromises made through *satisficing*. New meta-aggregates that resonate around solutions form.

Another link is added to the model, connecting *cognitive dissonance* to *buy-in*. As *cognitive dissonance* is reduced through the dynamics of "*a bird in the hand is worth two in the bush*" and "*birds of feather flock together*", *buy-in* increases. A loop labelled (R16), a deviation amplifying loop, themed – "*All aboard?*" is added to the model.

Figure 7.30.   All aboard?
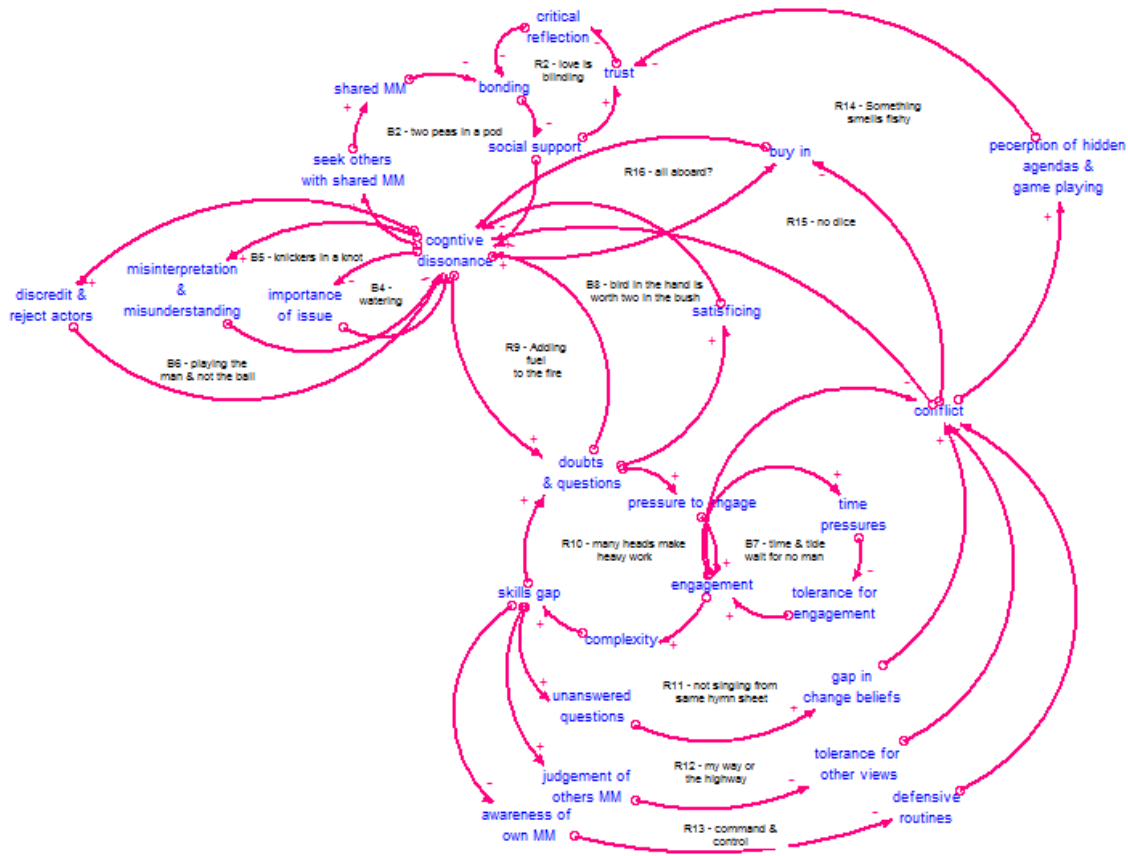
7.6.2. Summary and meso-propositions – how do entanglement and buy-in emerge?

Complexity theory together with dissonance theory provides a richer understanding for how and why entanglement emerges and why new meta-aggregates form. Entanglement emerges as a result of dynamics that create increasing *conflict*, *mistrust* and decreasing *buy-in*. The decreasing *buy-in* causes increasing post-decision *cognitive dissonance* and increasing *doubt*. This causes a review of unchosen alternatives and increased *satisficing* in order to reduce *dissonance*. *Dissonance* is further reduced by seeking and bonding with actors with shared mental models. This dynamic occurs within the informal network where enabling leaders work with administrative leaders to facilitate the emergence of solutions. New coalitions who support compromised solutions emerge.

Proposition 17: The greater the disharmony, the greater the cognitive dissonance of actors, the more doubts and questions (on core change beliefs) increase. The greater the doubts, the more actors will satisfice and the greater the entanglement.

Alternate formulation - proposition 17: The more the *"No dice!"* dynamic (R15), the more the "*a bird in the hand is worth two in the bush"* dynamic (B8) intensifies, the greater the entanglement.

Proposition 18: The greater the entanglement, the more the system will be pushed towards emergence.

Proposition 19: The more the cognitive dissonance of the actors is decreased, the more they buy-in to the satisficed solutions, the more that emergence will occur.

Alternate formulation - proposition 19: The more the *"all aboard?"* dynamic (R16) increases, the more that emergence will occur.

Proposition 20a: The more actors support revised satisficed solutions, the more these actors mobilise into a new structure/coalition (i.e., the more re-aggregation will occur).

Alternate formulation - proposition 20a: The more the *"a bird in the hand is worth two in the bush"* dynamic increases, the more the *"birds of a feather flock together dynamic"* will occur.

Proposition 20b: The more re-aggregation occurs, the geater the tendency of the system towards emergence.

Alternate formulation - proposition 20b: The more *the "birds of a feather…"* dynamic increases the more emergence happens.

Proposition 21: The more entanglement and re-aggregation occurs, the greater the tendency of the system towards emergence.

The framework below provides a concluding conceptualisation highlighting the meso-propositions related to the development of an emergence phase.

Figure 7.31.   Summary propositions on meso-level theory (Emergence)
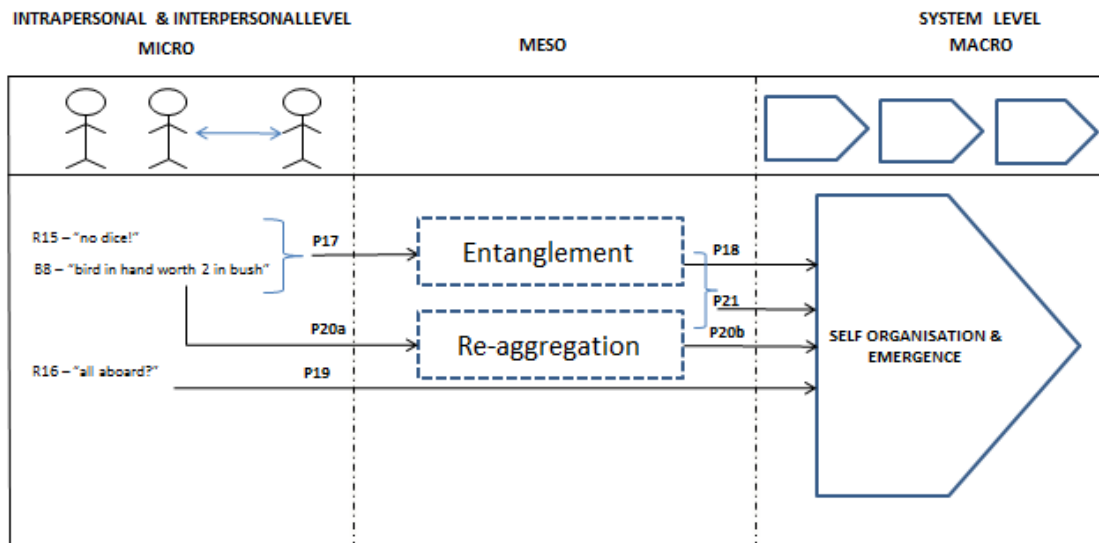
7.7. How and why does stabilising feedback (phase 4) come about?

The events from the narrative (Chapter 6) helped identify the dynamics that occur during the stabilising feedback phase. These include how disaggregation and stability occur. How and why each of these dynamics occurs is presented by referring to complexity, leadership and dissonance theory.

7.7.1. How does disaggregation occur?

The dynamics used for explaining how entanglement emerges are built on to describe how disaggregation occurs. Three additional causal loops are added namely:

- *"Sweeping it under the carpet"*
- *"Playing the man and not the ball"*
- *"Out of sight is out of mind"*

7.7.1.1 "Sweeping it under the carpet" – B9

As entanglement occurs and a new meta-aggregate (larger coalition) develops, actors who are not in support of proposed solutions are avoided. Evidence of this is seen as Tom and Des, strong supporters of Service C are left out of the informal engagements with other parties. Further evidence of this is seen as RegCo stall engagement with ThinkCo to develop the final policy position. RegCo also avoid any information provided that challenges their preferred position adopted. Des wrote to Jack attempting to convince him that some of the principles were being flouted by adopting Service D and not preferring Service C. Jack responds promising to engage. The opportunity to engage was never created.

> *I have been out of the office and only came back today. First I would like us to let the process unfold as agreed at the Steerco meeting lest we flout our own structures and thus Joe and the team should proceed working on what we agreed. I will however make time for us to discuss your proposal. I will go through it and come back to you with a proposal for a meeting. (264:3, 3-3)*

The very structures that were in place were "flouted" already without the actor realising that the enabling leaders engaged outside the established Steerco process.

Another example of avoidance is evidenced as Tom hints that the proposal positioned was not jointly crafted by the working group.

> Tom: I must say, I think it would have been preferable for me if the working group had a chance to thoroughly consider the two approaches. (281:70, 82-82)

Joe acknowledges that there was avoidance when Des and Joe bump into each other accidently. The essence of the dialogue was captured in field notes from the discussion and a follow up tele-conversation.

> [Des was surprised to see Joe at […]. Joe's first comment to him was that he was intentionally ignoring Des. (283:1, 2-2)

> Joe then indicated that there was no intent on his part to exclude Des from the discussions. He was merely acting on instruction from his management. They believed that they needed to get to clearer position by engaging with some of the stakeholders directly. Joe also indicated that this was not a copout from following adopted principles. RegCo were merely trying to be practical and asking what [process] would get the most buy-in from the industry. (284:36, 6-7)

To capture this dynamic a new node *avoid actors and info* is introduce into the model. As *cognitive dissonance* increases, there is an increased tendency to *avoid actors and info.* This deviation counteracting loop, B9, is themed – *"sweeping it under the carpet"*.

Figure 7.32.   Sweeping it under the carpet
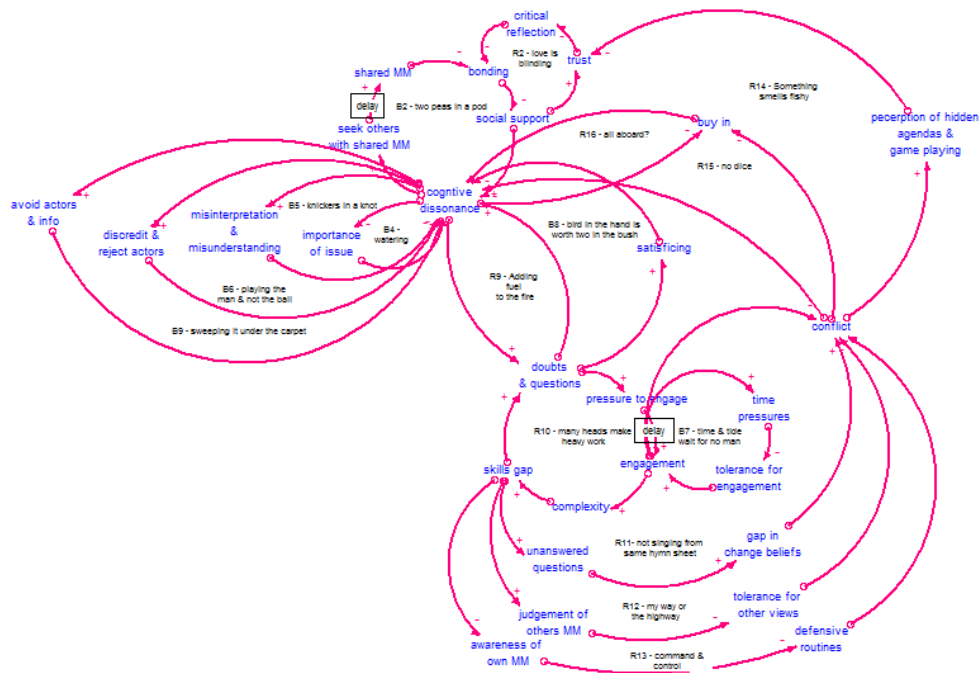
7.7.1.1. "Playing the man and not the ball" – B6

A further means to reduce dissonance is to increasingly *discredit and reject actors.* Joe provided insight on why Tom and Des were being avoided from their dialogue.

> *[Joe then indicated that there was some tension in the camp. Joe shared that RegCo had thought that at the last Steerco, [things] had gone too far. Des and Tom had overstepped boundaries.*
>
> *This was the main reason why Des sensed that they were cut off from the process and why RegCo had gone ahead with independent consulting with various stakeholders. (283:14, 2-7)*

The dynamic "*playing the man and not the ball*" is re-highlighted as a means to reduce dissonance.

Figure 7.33.   Playing the man and not the ball
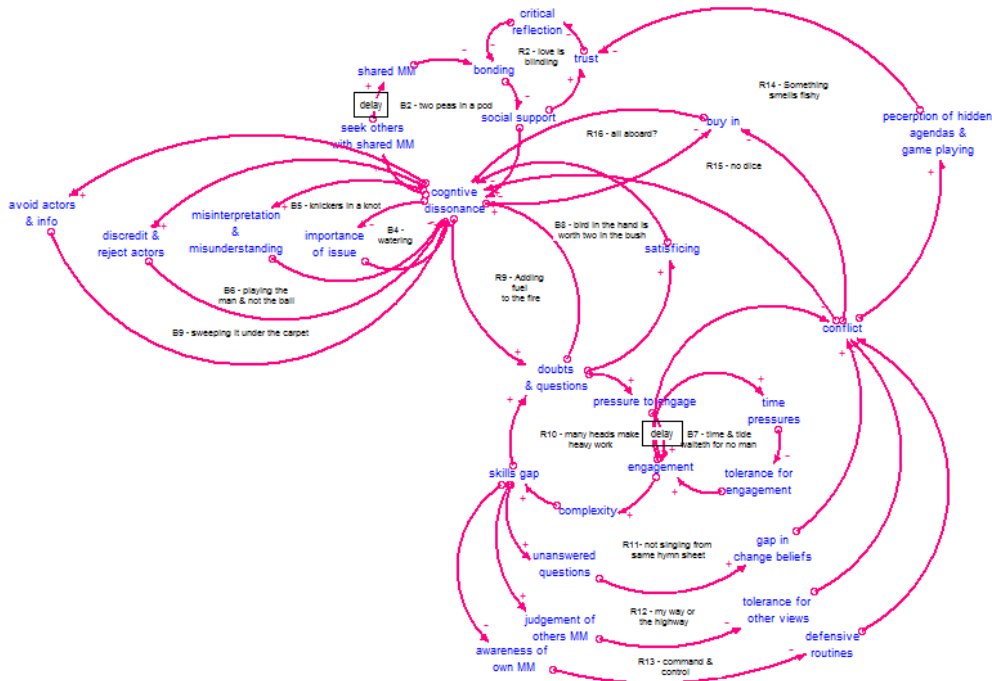
7.7.1.2. "Out of sight is out of mind" – R17

As the node *avoid actors and info* increases, there is decreasing *trust.* As an example Tom captures this decreasing *trust*, as matters that were agreed at the Steerco are not followed through.

> *Some of these were raised at the last Steerco, when it was suggested that Des and Joe jointly look at slight amendments to the proposed mandate. As I mentioned during my one-on-one, this decision was not pursued by Joe after the meeting. (289:7, 27-27)*

A new deviation amplifying loop R17, themed "*out of sight is out of mind" is* introduced. Further the decrease in *trust* leads to increased *critical reflection* and decreased *bonding* and *social support.* The reverse of the "*birds of a feather flock together"* dynamic plays out. These dynamics taken together lead to disaggregation (break-up of the initial Steerco coalition).

Figure 7.34.   Out of sight is out of mind
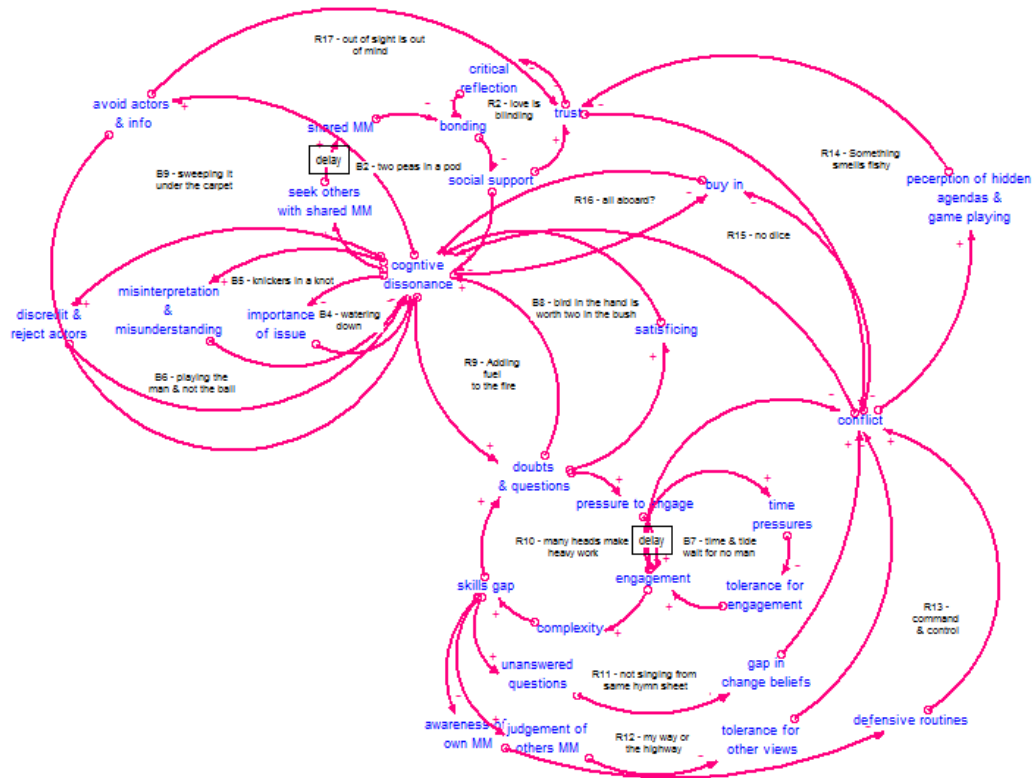
7.7.2. How does stability come about?

Stability (albeit temporary) is achieved when the change process is brought in line with the current administrative structures. This is denoted by the dynamic – "*sanity prevails*"

7.7.2.1.   "Sanity prevails" – R18

RegCo made the decision to pursue a Service D solution outside the initial coalition. After receiving buy-in from the industry they demanded that a project be instituted under the usual ThinkCo administrative structures. Des reflects on the final outcome.

> *[From his own perspective, Des had almost taken for granted that the fight was over. From the conversation with Joe at the party, and from the last Steerco, it became apparent to him that the decision had already been made outside the Steerco governance structure. Tom and Des were merely been informed of the decision]. (285:13, 10-11)*

Jack did respond in writing to Tom asking him ultimately to respect the decision of RegCo to implement within the usual structures what was decided.

> *I hope as previously communicated, ThinkCo accepts RegCo's decision and will work with industry parties to implement provisions of the mandate. (289:6, 72-72)*

Figure 7.35.   Sanity prevails
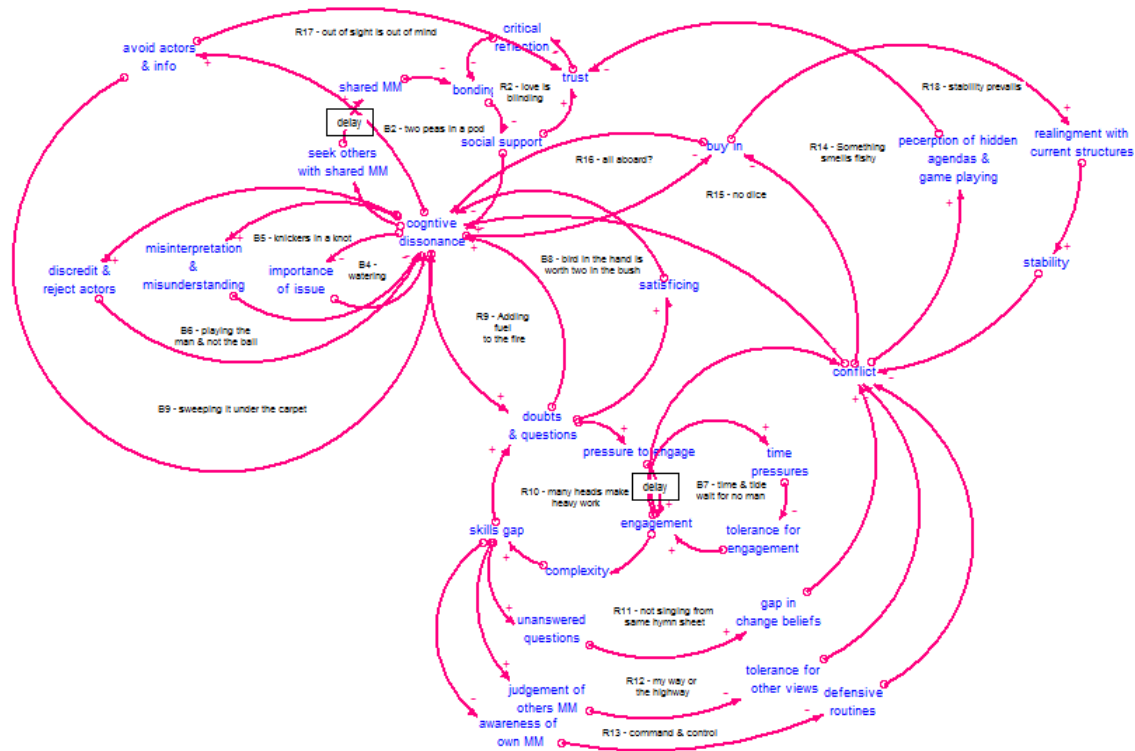
7.7.3. Summary and meso-propositions – how does stability come about?

From the above dynamics the following meso-propositions are advanced.

Proposition 22a: The more actors who do not support the emergent solutions and structures push back to retain older solutions and structures, the more the administrative structure avoids these actors and/or the information they provide, the more likely that the older coalition disaggregates.

Alternate formulation – proposition 22a: The more the *"sweeping it under the carpet"* dynamic (B9) increases the more likely that disaggregation will occur.

Proposition 22b: The more actors from the old coalition are rejected, discredited and bad-mouthed, the more likely disaggregation will occur.

Alternate formulation – proposition 22b: The more the *"playing the man and not the ball"* dynamic (B8) plays out; the more likely disaggregation will occur.

Proposition 22c: The more actors from the old coalition are avoided, the more trust decreases and older coalition actors grow increasingly critical and unsupportive of the new coalition. The more the older coalition decreases support, the more likely disaggregation will occur.

Alternate formulation - proposition 22c: The greater the *"out of sight is out of mind"* dynamic (R17); the more likely disaggregation will occur.

Proposition 22d: The greater the disaggregation of the older unsupportive coalition, the more the new emergent order is stabilised in the system.

Proposition 23: The more that the administrative structures formalise the new emergent solution; the more the new emergent order is stabilised in the system.

Alternate formulation - proposition 23: The more the *"sanity prevails"* dynamic (R18) increases, the more the new emergent order is stabilised in the system.

Proposition 24a: The more the conditions for each phase (Dis-equilibrium state, Tension and Threshold, Recombination/Self-organization and Stabilizing Feedback) are met, the more likely the initiation of the next phase dynamics.

Proposition 24b: The less the conditions for each phase (Dis-equilibrium state, Tension and Threshold, Recombination/Self-organization and Stabilizing Feedback) are met, the more likely the regression to the previous phase.

Proposition 24c: The greater the level of complex change skillsets, the shorter the Disequilibrium and Tension and Threshold phase and the sooner Emergence is likely to occur.

The framework below provides a concluding conceptualisation highlighting the meso-level propositions related to the development of the stabilising feedback phase.

Figure 7.36.   Summary propositions on meso-level theory (Stabilising Feedback)
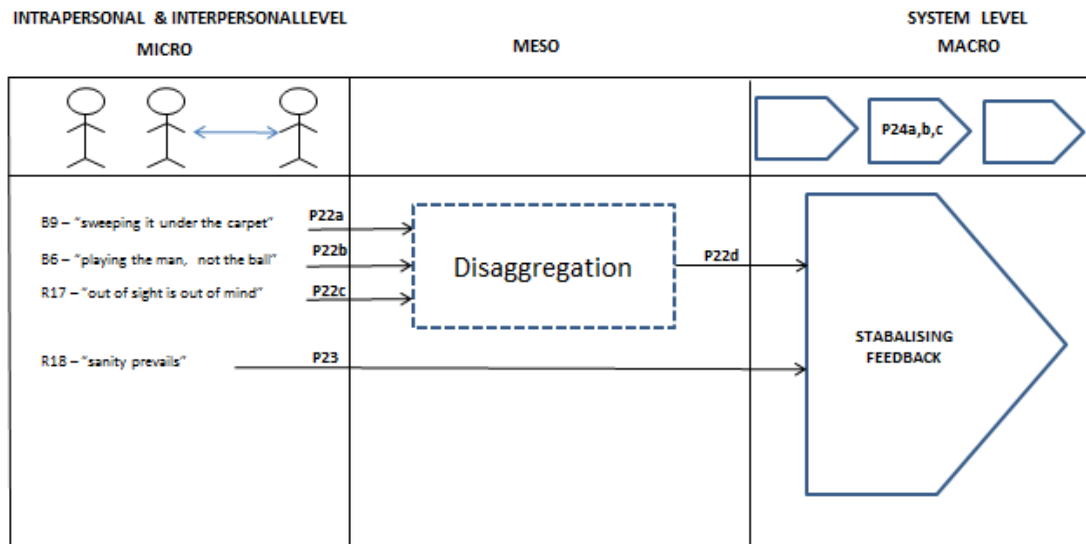
7.8.   Conclusion – meso-level theory of change

A meso-level process theory of change has been proposed based on causal mechanisms that arise as result of intrapersonal, dyad, group and system levels interpersonal dynamics that explain the advent of meso and macro-level outcomes.

How change unfolds across four phases is summarised.

How does disequilibrium state emerge?

Actors who experience high levels of dissonance due to a perceived discrepancy (the change belief that a gap exisit between the status quo and a desired state) reach out to others. The greater the alignment of mental models and core change beliefs the more likely aggregation will occur. The aggregate reach out to other actors. The more that the core change beliefs are clarified under influence of complex change skills, the more likely actors will form a meta-aggregate and resonate around core change beliefs. If the actors are powerful enough they will influence initiation and intensifying of the disequilibrium state.

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How does tension and threshold condition emerge?

Coalition actors engage with other actors. Actors increase their intrapersonal tension as a result of increasing doubts based on their own mental models and beliefs about the change. On-going behaviour to counter increasing dissonance leads to increasing need for engagement. Engagement based on differing change beliefs heightens conflict, mistrust and decreasing buy-in as a result of a shortage of change skills. Added time pressure and increasing disharmony lead to increasing tension and threshold conditions.

How does emergence happen?

Due to heightened disharmony and the threshold event, change leaders experience increasing post-decision dissonance. They cannot stay in this state. Actors have not bought into the change beliefs. Some enabling change leaders seek for win-win solutions and are willing to compromise and satisfice. They mobilise actors who share this satisficed position and negotiate new positions between the administrative and enabling leaders. New solutions and structures emerge through informal engagements.

How does stabilising feedback emerge?

Old coalition members who are not willing to compromise are avoided, rejected and badmouthed. The old coalition disaggregates. This leads to stability as the satisficed solutions are integrated into the existing administrative structures. Adopting satisficed solutions could be why change is often perceived as a failure.

In conclusion, how change emerges has been interpreted, explained and presented through the lens of complexity leadership theory and social cognitive theory (more specifically dissonance theory). A dynamic view of how change processes emerge has been presented using causal loop diagrams from system dynamics. The 17 reinforcing loops (deviation amplifying or vicious cycles) and 9 balancing loops (deviation counteracting or virtuous cycles) highlight intrapersonal and interpersonal processes. These processes lead to meso and macro-level outcomes presented as a meso-level theory of change through bridging propositions. A summation of the two summary causal maps is presented in Figures 7.37 and 7.38.

Figure 7.37. **Summary Causal Map One**
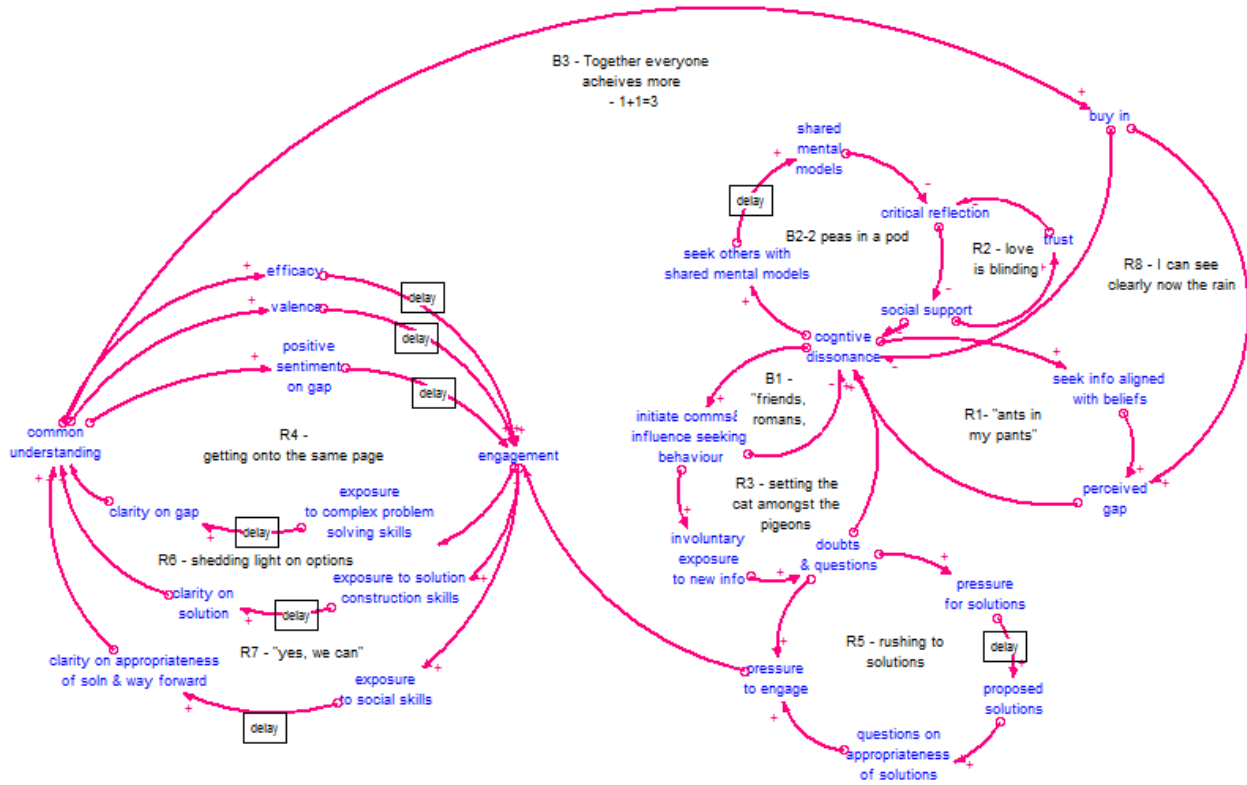
Figure 7.38. **Summary Causal Map Two**
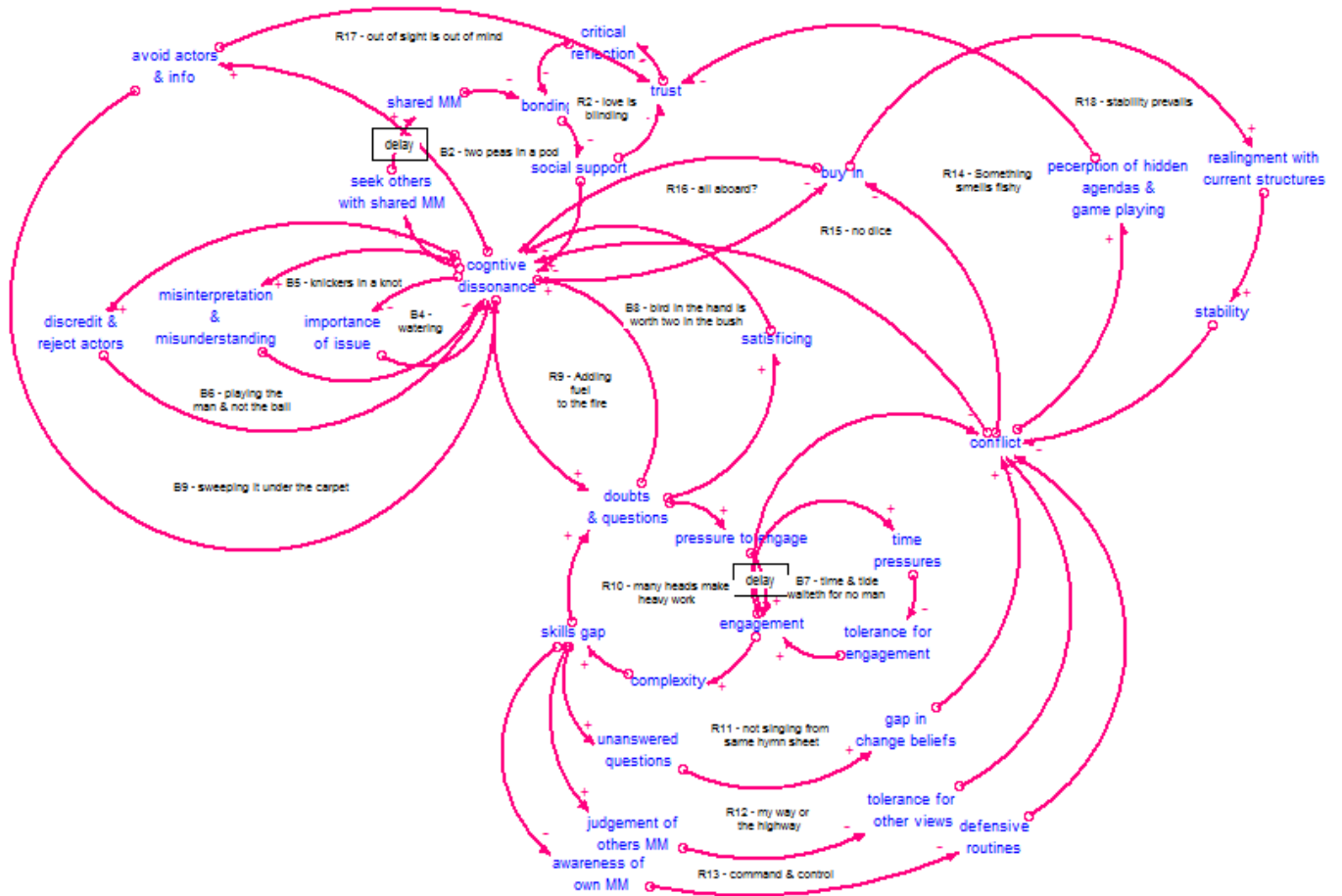
8. Discussion

This Chapter evaluates the findings of the research in relation to the published literature, as reviewed in Chapter 2. Several theoretical gaps were identified in the systematic review that was conducted. The contribution of this research in addressing those gaps, thereby adding to the body of knowledge on organisation change and advancing pursuit of the dual challenge posed by Beer and Nohria (2000)and Tsoukas & Chia (2002) is discussed below.

8.1. Theoretical Gap1: Dynamic process model of change

This research has shown that it is possible to study, understand and model organisation change as a dynamic process. This is important as it is acknowledged that simplistic, linear models have come under scrutiny in the scholarly literature (Gilley et al., 2009; Walker et al., 2007). Further the research begins to address the need highlighted by scholars such as Schneider and Somers (2006) and Uhl-Bien and Marion (2009) who call for such a dynamic understanding of organisation change. Through a process of description, discovery, interpretation, explanation and theory building, a dynamic process model has been offered. The complexity of change: the differing perspectives and needs (heterogeneity), the tension arising from these differing perspectives and mental models, the influence through interactions (Crevani et al., 2010), the ability to shift choices and directions as a result of sensemaking and sensegiving (Maitlis & Christianson, 2014), has been incorporated in the derivation of a dynamic process model of change.

Thus although frequently criticized as being too abstract to be of use in empirical research, complexity theory has proved to be very helpful here, in aiding understanding. Complexity theory and social cognitive theory have been used to advance understanding of complex processes of change. Non-linearity/dynamism has been embraced in this study and demonstrated through feedback loops. Both reinforcing (deviation amplifying) and balancing (deviation counteracting) dynamics are specified. The derived dynamic process model aligns with complexity theory's main contention that change processes are dependent on initial conditions (path dependency) and that outcomes are not predictable and controllable by for example hierarchical leaders at the top of organisations (Brown, 2012).

Feedback loops also re-iterate that there can be intended and unintended consequences (Chia, 2014). As an example, through interactions coalitions (aggregates) can form but equally these coalitions can break down as actors shift their change beliefs through sensemaking and sensegiving processes.

In terms of sensemaking and sensegiving dynamics, similar to findings by Näslund and Pemer (2012), dominant stories are a fundamental part of change processes: they drive the sensemaking processes as powerful actors mobilise to influence decision makers. As seen, powerful ranked actors influence decision-makers to pursue actions based on their interpretation of perceived discrepancies. Powerful actors (sometimes innocuously) create stories they tell and sell to others in power, creating dominant stories (e.g., Service C compromised principles) in the process. The study also demonstrates that those actors who relay stories that do not align with dominant stories can be discarded and isolated from the decision making process, as evidenced in the case.

A dynamic process model (highlighted in Figure 7.37 and 7.38) draws out these processes usually hidden or completely discarded in simple prescriptive recipes of change. This is most likely as a result of the underlying assumptions of change which is often perceived to be planned, controlled and in the capable hands of hierarchical leaders.

8.2.   Theoretical Gap2: Specifying and linking the processes of change - meso-level theory

As noted, although complexity theory assists in unravelling some of the processes of change (e.g. Uhl-Bien & Marion, 2009), specifying the processes that bring about different phases of change has been poorly addressed in the body of knowledge. The research begins to specify these processes with suggestions of processes that occur within and between particular phases. These are summarised in Table 8.1. The research demonstrates the usefulness of a strong process ontology.

During **Disequilibrium phase:**

Aggregates (coalitions and cliques) form. Coalitions form through the following dynamics:

Table 8.1.   *Summary of Dynamic Processes: Formation of Aggregate*

Code	Term/ Themes	Meaning/Description	Example
R1	**Ants in my pants**	Restlessness with the status quo begins the change process, through increasing intrapersonal discomfort, resulting from a problem/discrepancy perceived by the actor. Grows as the actor continuously adduces only information aligned with his perception of problem.	Tom believes Service B is being unfairly discriminated against: *Service B was unfortunately not specifically included in the policy at the time, which we believe was more an oversight… (2:3, 13-13)* He adduces supporting information aligned with his belief: *In terms of RegCo's original principles, which were again re-iterated in 2010, Service B type services should be encouraged and preferred … (2:5, 15-15).*
B1	**Friends, Romans, countrymen, lend me your ears**	An influence-seeking process resulting from growing cognitive dissonance between the beliefs of actors. Increasing intrapersonal discomfort (dissonance) drives reaching out to others.	Tom reaches out to Nelson at RegCo, engaging with Nelson on multiple occasions with no effect and eventually writing formally to him seeking his influence to change policy – and offering co-operation. *With reference to our previous discussions in this regard, I would hereby like to suggest that you consider an amendment to the policy in order to allow ThinkCo members to process Service B together with Service A. (2:1, 9-9)* *We request your favourable consideration for an amendment to the policy, and would be happy to assist in any way to achieve this speedily (…) facilitating consultation of the amendments with ThinkCo members and other relevant parties. (2:13, 19-19)*
B2	**Two peas in a pod**	Actors bond and support each other as a result of shared beliefs, values and needs. This social support aids in reducing cognitive dissonance. As people are mobilised through sharing similar ideas, needs, values and change beliefs, intrapersonal tension is reduced, creating a virtuous cycle of seeking out other actors with shared mental models.	Tom seeks out Des and Oliver (who work for Tom). Des, reflecting on why he supported Tom's position, captures the essence of why they bonded in a reflective memo: *So Tom and I shared the same views on the topic, not because he was the boss and convinced me otherwise, but because we believed that we should follow a principles based approach. I felt that we supported each other through having a common mental model on the topic.*

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Code	Term/ Themes	Meaning/Description	Example
R2	**Love is blinding**	A dynamic that blinds actors from seeing flaws in their own beliefs, arguments and assumptions. Increased bonding and social support leads to increased trust in like-minded peers, stronger bonding, and decreased critical reflection on possible flaws in a position.	Des reflects on why he did not challenge the underlying assumptions that Service B was superior. *On reflection of why I did not pick up the issues and inaccuracies with the underlying assumptions of Service B (and its misalignment with principles), I could put it down to lack of experience [but] this could not be the case as I had been integrally involved …*
R1,B1,B2 & R2	**Birds of a feather flock together**	Those with shared mental models are drawn, and stick together, mobilise others and support similar change beliefs.	On receipt of written industry responses Joe and Des interpreted the responses in the same way. *Both Joe and Des noted that Actor A's response was disappointing. We were taken aback by the challenging tone of the note. We also found it quite strange that the purpose of the document which was to try and understand where different stakeholder's philosophies were was not understood. I also noted that my disappointment was that Actor A also represents the industry in other capacities. The level of thinking was certainly not from an industry perspective …(34:4, 5-5)*

Next, the coalition looks to influence a larger audience. Larger coalitions form. They form through on-going interactions that influence shifts in core change beliefs. Correlation (common understanding) on the change beliefs (discrepancy, appropriateness, valence and efficacy) emerges. This correlation emerges through the following dynamics.

Table 8.2.   *Summary of Dynamic Processes: Correlation*

Code	Term/ Themes	Meaning/Description	Example
R3	**Setting the cat among the pigeons**	A process which challenges the status quo and increases actor's dissonance by forced exposure to new information.	Tom's coalition seeks out others to convince them of doing something about the perceived problem. Tom and Des prompted sessions with Nelson and his team to continue the influence-seeking process and force exposure to new information. This had an impact: *Nelson appeared tense and worried. His main concern was how some parties (mostly DemAlliance) would respond to this. "I agree with principles but …I feel like I am on a precipice and you guys are gently pushing me from the back". (4:48, 42-44)*

R4	**Getting onto the same page**	A reinforcing process that helps actors develop positive sentiments around solving the problem as a result of rich engagement and exposure to complex problem-solving skills. Clarity is obtained on the definition of the problem and differences in positions.	As coalitions form with increasing exposure to new information, actors request further engagement. Through this engagement, questions are answered and clarity is achieved about necessary changes in the status quo. *Nelson: Is this not a different citizen base though? Why should they want to have privileges like Service A? (4:12, 19-19)* *Tom: We know that with the recent crisis, all types of parties are under pressure to have their services marketed. Why should Service B be biased from privileged servicing if in fact the citizen has given ThinkCo members permission for this? (4:14, 20-20)* *Jack* [Much later, after he has replaced the now-retired Nelson]*: Sorry, don't the parties understand that we are trying to move to a situation where we will address the preference servicing issue, strengthen consents and get rid of citizen complaints. Do they not understand that? (186:225, 10-12)*
R5	**Rushing to solutions**	Actors jump to solutions rather than clarifying the problem.	From the initial engagement with Nelson and his team, instead of fleshing out the problem in greater detail, there are immediate suggestions of solutions. *Actor: So what are we going to do about this? We could just include Service C… (4:24, 32-32)* *Other industry actors, later: Will it not be more productive to spend the energy of the resources on Project Integrate to ensure it meets the future needs of the parties for the next generation? … if possible the industry should not require them to make major changes to their current services and rather sell Project Integrate with the value added features.(21:29, 539-539)*
R6	**Shedding light on the options**	Clarity-bringing process employing solution construction skills to weigh solutions, analyse their pros and cons and consider their appropriateness. Through rich engagement the process leads to common understanding and positive sentiment on the benefits of proposed solution (valence).	Des and Joe clarify to the Steerco why Project Integrate was not an appropriate solution. *Project Integrate is an important strategic project. It will provide flexibility… However it has little potential to address the problem statements of a more strategic nature and address policy objectives. (38:14, 398-608)*

R7	**Yes, we can…**	Clarifying the gap and proposing solutions are not enough; getting to common understanding requires people skills. Engagement and effectively applied social skills foster an interpersonal dynamic that aids in developing common understanding of the problem and the appropriateness of different solutions. This dynamic can operate alongside the clarification of problems and the consideration of solutions.	During the debate around Project Integrate, Joe (part of the Steerco) began doubting the appropriateness of the solutions tabled. Des uses his skills in expressing discussion points to provide clarity and build consensus *Des: I think we have to carefully consider each of the arguments that are being put on the table. However, I think we have to be careful that ... For example – please bear with me– I don't mean to frustrate us when I keep repeating that – if we define the problem as being…, then all we will be solving is... To be more clear, if the issue is about … then ... This is why Actor X is arguing that Project Integrate will resolve the issue. I think, though, that our argument is a bit broader. Again, please bear with me… As we defined it, our problem is twofold … That means that… For this reason we prefer...* *Joe: it's good that we are having this discussion. I appreciate the opportunity to bounce these thoughts off you. It's quite correct.*

Correlation causes buy-in (principal support). Buy-in leads to formation of a meta-aggregate. They are correlated on the change beliefs and thus committed and supportive of the change. This creates the necessary condition for the disequilibrium phase, where enough discomfort exists and there is a clear indication that the status quo will not suffice.

Table 8.3.   *Summary of Dynamic Processes: Formation of Meta-Aggregate*

Code	Term/ Themes	Meaning/Description	Example
B3	**Together, everyone achieves more**	A virtuous dynamic describing how through positive feedback loops and skilled facilitation which tolerate and facilitates different voices, buy-in can be achieved by developing common understanding. Achieving such synergy requires three specific change skills that work together: ***complex problem solving skills***, ***solution construction skills*** and ***social skills.***	During the 7th Steerco, Joe positioned his preference for Service D; Des facilitated an understanding of why Service C was more appropriate. After some discussion it was agreed that Service C would be the option to go for. Other key decisions were made as well during this session. *Gwen: I think we say to the industry that we'd like it (Service C) in immediately. (149:81, 97-97)* Des captured these agreements in his reflection on the session.

			I thought the meeting went really well. The main reason was that we had achieved decisions on critical outcomes. Some of these outcomes were: • *We had agreed that Service C (preferred by Tom and Des) was what we were pushing for.* • *We had agreed that Service D (preferred by Joe) was not the ultimate goal.* • *We had also agreed on interim solutions for example inclusion of Service B with Service A.* • *We had also agreed on the way forward for engagement at 3 December session with the industry.* • *It also appeared that we were beginning to apply our minds to what the next steps would be for example the crafting and changing of legal frameworks.(149:230, 286-293)*
R9	**I can see clearly now**	A process that describes how actors develop increasing buy-in as shared understanding grows. This dynamic also plays a role in explaining how larger coalitions are formed.	Numerous engagements brought Jack and the rest of the Steerco fully on board. Jack through his comments above demonstrates how buy-in leads to improved perceptions of where the gaps in provision (and in the understanding of it) are. *Jack: sorry, don't the parties understand that we are trying to move to a situation where we will address the preference servicing issue, strengthen consents and get rid of citizen complaints. Do they not understand that? (186:225, 10-12)* Jack again demonstrates this enhanced understanding of the gap in provision by strongly motivating for acceptance of Service C in a later joint clarification session with the industry. *Jack: … RegCo has decided for these reforms to happen and it definitely will happen, as you can see. I think what we have to accept is that Service C must be a reality. (199:341, 204-204)*

Summary – thus far the dynamics described above explain how and why coalitions form, how and why common understanding and buy-in is achieved and how larger coalitions form. This larger coalition now engages with others in an attempt to influence others on the core change beliefs (e.g., on the problem/discrepancy and appropriateness of solutions).

As more actors join the engagements, there are differing views, concerns and needs. Cognitive dissonance of actors and group tension increases – this time between the group already accepting of the change, and the new parties to the now-broadened discussion. Engagements grow increasingly tense. Conflict and mistrust intensify.

The above dynamics create the necessary conditions for the change process to move into the next phase – towards **Tension and Threshold**.

During **Tension and Threshold:**

There is heightened awareness of change beliefs which creates discomfort. Actors who experience high levels of dissonance exhibit specific mechanisms (behaviours). As interactions unfold and conflicting change beliefs remain unresolved conflict heightens.

Table 8.4.   *Summary of Dynamic Processes: Emergence of Conflict*

Code	Term/ Themes	Meaning/Description	Example
B4	**Watering down matters**	The dynamic of actors reducing intrapersonal cognitive dissonance by decreasing the importance of information presented i.e. by downplaying points that may be key.	Actor B, a strong supporter of Project Integrate, attempts to downplay matters by suggesting changed priorities that shift away from the document's change proposals: *Such reviews cannot be done in isolation and cognisance must be taken of industry developments. We are busy with the Project Integrate that has the potential to address all the issues raised in this paper and more within a few years. Will it not be more productive to spend the energy of the resources on Project Integrate to ensure it meets the future needs of all the constituencies for the next generation? (21:35, 539-539)*
B5	**Knickers in a knot**	A balancing loop where actors reduce intrapersonal cognitive dissonance by misinterpreting and misunderstanding new information presented.	Other actors who were exposed to the new information presented by the Steerco, attempt to reclassify existing services to the advantage of their offerings: *We request the "authorities" to consider, as a minimum, a request to re-classify Service A as a similar Service as Service C (i.e., a service that is as efficient as Service C). By re-classifying Service A as similar to Service C, we are of the opinion that any objections against creating a preferred Service can be justified (17:9, 54-55)*
B6	**Playing the man & not the ball**	The dynamic of actors reducing intrapersonal cognitive dissonance by rejecting, badmouthing and discrediting actors "on the other side".	In a private informal discussion a party member of Co1 raised the concern that Tom was fixated with giving preference to Service B: *Come on Des, you'll remember this well. When … this pushing for Service B to be preferred was a pet topic for Tom. He pushed hard then and hasn't let go of this. This is why this topic has come up again. (373:1, 3-4)*

Code	Term/ Themes	Meaning/Description	Example
R10	**Adding fuel to the fire**	As intrapersonal tension increases, demonstrated by acts such as badmouthing, misinterpreting or downplaying matters, there are increasing doubts and questions which continue to feed tension, creating a deviation amplifying feedback loop.	After months of engagement, this exchange between two key actors in the change process demonstrates a sharp, dismissive tone: *Patricia: just quickly - what is the problem that we are trying to address?* *Des: I'm hoping that's tongue-in-cheek Patricia. I'll deal with it when we come back. I'll recap it when we come back…My sense is that we've gone around this circle many times.* *Patricia: So what is the problem? What you are really saying is this - the problem is let's moves towards citizen authorisation of services … Take Service C out then….. It's as simple as that… and that is why I come to you in confidence and say we need to review the definition of some of the principles. (199:371, 140-149)*
R11	**Many heads make heavy work**	As the number of actors, with differing ideas, needs and beliefs join the dialogue complexity grows, increasing the change skills gap, which in turn creates even further doubts and questions. These build up pressure for further engagement, leading to a vicious cycle.	One actor after intense debate during an engagement process captures that his doubts and questions persist. *Actor: My expectation of today was quite different - I must be honest. What I was expecting to do was answer the clarification questions (171:201, 78-78)* Another participant also highlights their experience of a skills gap leading to further doubts and questions. *Actor: I think it's all kind of good going through the implementation process but hear us, hear us… I know we've spoken about maybe the intent of this session but it almost feels like we running into the next steps without understanding what we dealing with around this proposal. Does the proposal meet the principles? (171:202, 100-100)* Another participant stresses that there are questions that remain unanswered. *If we're clear on the problem that we're trying to solve then we can give meaningful feedback on the proposal and those points weren't clear in the presentation (171-204, 118-118)*
R12	**Not singing from same hymn sheet**	Describes a deviation amplifying cycle which causes an increase in cognitive dissonance as a skills gap leads to unanswered questions, differing change beliefs and	During another engagement process, one of the actors captures that there are unanswered questions and differing change beliefs. The actor does not believe that the proposed solution is appropriate and this disagreement leads to

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Code	Term/ Themes	Meaning/Description	Example
		increasing conflict.	increasing conflict and increasing dissonance (tension) for this actor.
			Actor: If you look broader - the thing is the implementation of this is not cheap - it's not going to be a cheap service for anybody… it's no longer simple. It's no longer a simple citizen initiated service because there is a huge amount of work to actually create that service. Let's not simplify this. That to me is almost feeling like we're being railroaded into this idea and we saying it's a given….because it aligns with some principles. I think let's step back from it… to be honest. (171:210, 100-100)
R13	**My way or the highway**	Conflict arises from the increasing skills gap. This leads to negative judgement of other actors' mental models and a decreased tolerance for other views.	In the joint clarification session Gwen captures this judgement of other actors. *Gwen: I want to stop you for the moment and just ask this audience to stop talking from your own party perspective. We are looking at a strategic problem and we need to address it. So I would just like to caution everybody to stop thinking about your own party interests, and start thinking about the good of the industry, the good of the project and what you can live with. (199:150, 127-127)*
			The decreasing tolerance for other views is captured as one actor demands sticking to principles; another points to impracticalities of the solution and a third dismisses concerns as "not strategic":
			Tom: I think the vision documents are very clear…. and these are international principles as well. Actor: But in the real world there are huge practical implications.
			Des: Let me cut to the chase, most of the questions are either operationalisation concerns or unintended consequences. (186:224, 9-9
B7	**Time and tide wait for no man**	Increasing engagement creates time pressures, which causes decreased tolerance for engagement and thus less engagement This balancing	*Gwen: We have been in discussions with the industry for more than two years and to try and look at this problem and I think it's now time for*

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Code	Term/ Themes	Meaning/Description	Example
		dynamic captures how the drive for swift solutions exacerbates conflict.	*the industry to come together and lets implement something because as an industry we are not going to move forward.(199:373, 127-127)* *Jack: I hope that we are not going to start from way back now, because I fear the time. (199:295, 269-269)*

As conflict heightens, there are increasing perceptions of mistrust.

Table 8.5.   *Summary of Dynamic Processes: Growing Mistrust*

Code	Term/ Themes	Meaning/Description	Example
R14	**Something smells fishy**	Through the dynamics of *R12, R13* and *B7,* actors with differing change beliefs, whose voices are not being heard due to a decreased tolerance for other views or whose requests for engagement fall on deaf ears, tend to perceive increasingly that there are hidden agendas and game-playing. This creates a vicious cycle of spiralling conflict	*Actor: I get the feeling that I may as well go back and throw my response in the dustbin because the decision has been made and now we are being asked to respond in writing. Nobody is concerned about the work that we as an industry have been working on for 2, 3, 4 months maybe and I'm not 100% sure if I am the only one in the room that gets that feeling…. (199:340, 203-203)* *Lin: Chairman, with all due respect we have a problem with this process. Maybe you should have said that at the beginning of the meeting already. That the Steerco has already made the decision and just forcing it upon us… because our comments are actually worthless (199:213, 205-205)*

The growing conflict and mistrust leads to a threshold event and decreasing buy-in to the change.

Table 8.6.   *Summary of Dynamic Processes: Decreasing Buy-in & Threshold Event*

Code	Term/ Themes	Meaning/Description	Example
R15	**No dice**	This describes the point at which diminished buy-in and increasing intrapersonal cognitive dissonance lead to blocking tactics.	*We are not sure that the proposed Service C addresses any significant risk issues, but will certainly create major complexity for all parties in terms of implementation, on-going administration and maintenance. (241:58, 22-22)* *We therefore concur with the response document of DemAlliance that Service C, as presented is not acceptable (218:16, 21-21)*

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			The proposed Service C, in its current design, has many inherent flaws and is not acceptable to Alliance4 members (219:7, 51-51).

The system cannot stay in this state of heightened conflict, mistrust and lack of buy-in. The above dynamics create the necessary conditions for the change process to move into the next phase – towards **Emergence**.

During **Emergence:**

There are increased levels of dissonance for enabling leaders. They work to reduce dissonance by quickly negotiating with members and understand constraints. Entanglement occurs and actors satisfice. Through these processes, buy-in emerges.

Table 8.7.   *Summary of Dynamic Processes: Entanglement & Satisficing*

Code	Term/ Themes	Meaning/Description	Example
B8	**A bird in the hand is worth two in the bush**	This describes a balancing dynamic where change leaders reduce dissonance by 'satisficing': deliberately compromising on proposals to address diminishing buy-in and high levels of tension in the system.	*Gwen: We must however strive for the win-win situation, even if we have to soften our stance. We need to get all parties to buy in and create synergy. (272:2, 30-30)* *Jack: Would it not make sense to compromise, seeing that both processes are so similar. (257:42, 51-53)* *Jack: Even though we could have built a Rolls-Royce we are willing to settle for less for as long as it addresses the key of what we're trying to address. (281:176, 15-15)*
R17	**All aboard**	This dynamic emphasises how buy-in is achieved as a result of decreasing intrapersonal cognitive dissonance.	Actor's written response on confirmation of a compromised Service D solution highlights their buy-in. *Actor: It is our view that the new proposal from RegCo is very positive and commendable. This time round they are not prescribing the detail operation… but are setting the broad guidelines. They are inviting the industry to participate in crafting a solution that can work in accordance with sound principles. (374:1, 5-6)*

As buy-in across different stakeholders increases and actors buy-in to the discrepancy and appropriateness and benefit of the solution, actors mobilise to support the change. The above

dynamics create the necessary conditions for the change process to move into the next phase – towards **Stabilising Feedback**.

During **Stabilising Feedback:**

The new coalition avoids older coalition members who are opposed to the new emergent solutions. Coalitions that do not support the new order break up. Dissonance reducing behaviours such as *"playing the man and not the ball"* and *"rejecting and badmouthing"* actors are observed. There is integration of the outcomes back into administrative structures.

Table 8.8.   *Summary of Dynamic Processes: Stabilising Feedback*

Code	Term/Themes	Meaning/Description	Example
B9	**Sweeping it under the carpet**	Actors and/or information that oppose the new compromise solution are avoided. This process leads to reduced dissonance and initiates a balancing cycle. Actors further reduce intrapersonal cognitive dissonance by rejecting, badmouthing and discrediting oppositional actors as in B6 above.	After the initial larger Steerco coalition breaks when some actors will not compromise, tactics are devised to avoid these actors and information they supply, as described below: *I was surprised to see Joe … Joe's first comment to me was that he was intentionally ignoring me (283:1, 2-2)* *Joe then indicated that there was no intent on his part to exclude me from the discussions. He was merely acting on instruction from his management. They believed that they needed to get to a more clear position by engaging with some of the stakeholders directly…RegCo were merely trying to be practical and asking themselves what would get the most buy in from the industry. (284:36, 6-7)* *Joe shared with me that RegCo had thought that at the last steering committee, Tom had gone too far. He had overstepped the boundaries (283:14, 2-7).*
R16	**Out of sight; out of mind**	As actors are left out of the engagement process, there is decreasing trust, increasing critical reflection and the previous social support is destroyed, creating a vicious cycle.	Tom raises his concern that actions agreed are not being pursued and RegCo are seemingly moving on their own: *Some of these were raised at the last Steerco, when it was suggested that Des and Joe jointly look at slight amendments to the proposed mandate. As I mentioned during my one-on-one, this decision was not pursued by Des after the meeting. (289:7, 27-27)*
R18	**Sanity prevails**	This dynamic emphasises how stability is achieved.	RegCo made the decision to pursue a Service D solution outside the initial coalition. After receiving buy-in from the industry they demanded that a project be instituted under the usual ThinkCo administrative structures. Des reflects on the final outcome. *From my own perspective, I had almost taken for granted that the fight was over. From the conversation with Joe at the party, and from the last steering committee, it became apparent to me that the decision had already*

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Code	Term/ Themes	Meaning/Description	Example
			been made outside the steering committee governance structure. Tom and I were merely been informed of the decision (285:13, 10-11) Jack did respond in writing to Tom asking him to ultimately respect the decision of RegCo to implement within the usual structures what was decided. *I hope as previously communicated, ThinkCo accepts RegCo's decision and will work with industry parties to implement provisions of the mandate (289:6, 72-72)*

In summary, change does not occur in a linear manner. The micro-processes at play iteratively influence macro-level outcomes.

8.3.   Theoretical Gap3: Providing a meso-level theory

Aside from presenting a dynamic process model and specifying the underlying processes, the research also specifies a meso-level theory. This is important as micro-level processes are linked to macro-level outcomes. This is a unique contribution, as although other researchers such as Lichtenstein and Plowman (2009) present meso-level dynamics, their emphasis is on behaviours that impact phases. This research has magnified processes that link to macro-level outcomes. This aligns strongly with a process ontology (Langley et al., 2013).

Such a contribution represents a quad-motor theory as suggested by Van de Ven and Poole (1995). The model includes *teleological motors* where perceived discrepancy by a single actor leads to psychological discomfort that drives the seeking of goals and end states by this individual. *Dialectical motors* are also evidenced as heterogeneous agents hold varying change beliefs that lead ultimately to conflict and synthesis. The micro-level processes provide evidence of how the on-going teleological and dialectical processes interplay to produce phase outcomes. There is thus evidence for *life cycle generative motors* during this single instance of change. Disequilibrium, tension and threshold, emergence and stabilising feedback are evidenced.

Once the emergent solutions and structures are agreed, organisations have to adopt the solutions as a result of regulatory decree. The environment thus drives the selection and retention of organisational forms. This provides evidence of *evolutionary motors*. Hence, the study provides evidence of the four generative motors at work simultaneously and interactively.

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These are the building blocks for more complex models of change, as put forward by Van de Ven and Poole (1995). However, the research also contributes additional insight in suggesting that the phases of change do not necessarily occur in a linear manner. Regression to previous phases is possible, if the conditions per phase are not met. For example, tension at the organisation level is seen as necessary in order for emergence to occur. Similar to Houchin and MacLean (2005), this research found that emergence does not occur if this Tension and Threshold phase and its related dynamics do not occur.

The research also contributes to and supports Burnes (2004) observation that phases of change as suggested by Lewin (1947) are not in conflict with a complexity understanding of change. This research demonstrates that complexity dynamics can happen within and between phases of change, with the caveat that the phases do not need to follow a linear approach. This understanding of what happens during and between the phases of change goes a long way to address Tsoukas and Chia's (2002) concern of not knowing enough about how change is accomplished. However it also responds to James's (1909/1996, p.251) notion of having insight of the "vision of the far and the scattered alike", thus knowing what happens at the micro-level but also being able to roll up the patterns into the macro-level which usually escape our perceptions - as humans struggle to see these patterns play out at different levels of analysis (Tsoukas & Chia, 2002).

8.4. Theoretical Gap4: Building theory: explaining why phenomena happen

The research goes beyond describing the processes of change occurring within and across phases of change embedded in a dynamic process model. To progress theory, theoretically-rich explanations of why processes triggered by respective behaviours at the micro-level occurred, was deemed necessary (Sutton & Shaw, 1995; Whetten, 1989). By utilising social cognitive theory (especially dissonance theory) explanations for behaviours were posited. Thus behaviours such as badmouthing, or rejecting/discrediting actors were explained through dissonance theory and were not relegated as background data (e.g. Beech & Johnson, 2005). The greater use of social psychology theory responds to the call by scholars such as Houchin and MacLean (2005) and Jaros (2010).

In line with these calls, generative micro-level mechanisms such as "ants in your pants" are explained by using social cognitive theory. Similarly why coalitions/cliques are formed is explained through complexity theory (notions of actors bonding as a result common schemata and resonance around change beliefs) as opposed to explanations of such phenomena using social categorisation or social identity theory. The research strongly aligns with the notion that good theory must explain why phenomena occur rather than just describe how phenomena emerge (Van de Ven, 1989).

8.5. Theoretical Gap5: Identification of change specific skills required

As raised in the literature review, a serious gap in the literature is identification of change specific skills different to management skills required in the everyday business of organisations. The literature has often assumed that general management skill is what is required to manage change (Battilana et al., 2010). The research presents evidence that aligns with studies such as those by Mumford et al. (2000), Mumford et al. (2007); Battilana et al. (2010) and Preget (2013) seeking to clarify change specific skills. Three such skills were highlighted aligned with the findings of Mumford et al. (2007). It is suggested that these complex cognitive skills cannot be taught in a classroom. The skills are learnt from experience and are matured through engagements in complex adaptive systems. The specific properties of each of the complex cognitive skills were drawn out and codified through this research.

The research suggests that the code of change management should include these skills and it is these skills that drive "positive behaviour" (see Section 9.4.2. for further discussion on the practical contribution of the research). Change although ongoing, appears to require these specific skillsets in order to advance common understanding and buy-in.

8.6. Theoretical Gap6: Surfacing of positive and negative behaviours

Unlike research such as that by Marion and Uhl-Bien (2001) or Lichtenstein and Plowman (2009) which draws out only positive behaviours during the change processes, negative behaviours such as badmouthing are also embraced.

For clarity negative behaviours do not imply that they are harmful or destructive to the change process or that change outcomes could be a failure due to these behaviours. These behaviours are described as negative as they are often perceived so by actors but could be vital for triggering change processes and moving the change process forward. As an example actors mobilise by rejecting other actors and "playing the man, not the ball". Actors resonate around this badmouthing and support each other as a result of such processes.

This research contributes by surfacing these behaviours and processes and foregrounds these as a crucial part of change processes. This is unique as even hierarchical leaders often perceived to reflect only positive behaviours are shown to demonstrate behaviours such as judging other actors mental models which leads to heightened conflict (seen as necessary and not as negative within this research). The notion though of heroic leaders who know all the answers and who are often assigned good behaviours is challenged.

The overwhelming evidence from the case is that hierarchical leaders often perceive gaps aligned with their own mental models and agendas. Powerful actors mobilise others and through non-neutral sensemaking and sensegiving processes convince others on important change beliefs (such as discrepancy, appropriateness of solutions and approaches, valence etc.). In line with observations by McClellan (2011), interactions and conversations are not neutral. These are important moments as actors influence each other on respective change beliefs. Power matters. Outcomes are determined through powerful actors who can influence particular choices and directions.

In line with observations from critical discourse theory, the research illustrates why resistance to change is best understood as a neutral phenomenon (not to be demonised or celebrated). Evidence from the case aligns with the view that actors resist other actors rather than resisting change beliefs. This is important as actors "play the man, not the ball". Crucial skillsets to move past this include the three complex change skillsets posited, where focus is drawn to the issues at hand, rather than the people involved. Actors may be behaving in a bounded rational manner (Simon, 1991).

8.7.   Theoretical Gap7: Providing an actionable theory

The research contributes towards an actionable theory. This is drawn out under practical contributions, where tools such as conversational cues and tactics for practitioners are suggested, in Chapter 9. The link to double loop learning and model 1 and model 2 behaviours is demonstrated in Chapter 9.

8.8.   Other theoretical contributions

The research also contributes by providing a revised definition of change. The research aligns with the notion that change is an ongoing phenomenon. In line with a process ontology of change, change was defined as: ***the reweaving of actors webs of belief (shift in sentiments) and habits of action (shift in routines), which occurs fundamentally through (formal and informal) sensemaking and sensegiving engagement/interaction, that leads to ongoing shift in choices by the organisation, with intended and unintended consequences.***

As noted, such a definition embraces process ontology, maintains the importance of individual micro-level focus but draws attention to organisation-level (whilst maintaining change as enabling organisation becoming). It also draws attention to choices which may have intended and unintended consequences. The unintended consequences align with MacKay and Chia's (2013) notion of unowned processes that cause unintended consequences.

Evidence from the case strengthens the revision to the Tsoukas and Chia (2002) definition. Many examples covered from the case demonstrate the importance of informal interactions, as actors (sometimes enabling leaders) mobilise to influence choices. Such choices made sometimes result in unintended consequences, such as disaggregation of a primary coalition.

Further in terms of choices, unlike Houchin and MacLean (2005) where emergence was not observed, this research demonstrates that emergence occurred, but similar to Houchin and MacLean (2005), the observation is that actors satisfice (i.e., actors do not choose optimal solutions but rather solutions as close as possible to the status quo). It is argued here that under conditions (as seen in the case) of high complexity (differing and conflicting needs by heterogenous actors, ill-defined and novel problems, multiple competing solutions, high

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interdependency between actors, increased levels of engagement) that leads to intense and heightened tension and conflict, actors will satisfice and this is an inevitable outcome of change (again, under these conditions). This is as a result of systemically widening complex skills gaps and enabling leaders attempting to accommodate multiple stakeholder interests.

Lastly, to the researcher's knowledge, no other research has contributed to understanding how coalitions form and over time collapse (disaggregate), nor traced over time why this happens. This extends complexity theory to include the concept of disaggregation rather than just considering bonding-up mechanisms such as aggregation and meta-aggregation, but includes bonding-down mechanisms as well.

9. Conclusion

9.1. Introduction

This chapter draws conclusions from the main findings of the research, as summarised in the preceding chapter. "Ten Take-Outs" from the research are highlighted. First, the mechanisms (processes) that bring about different phases of change are summarised. This constitutes the main finding and contribution of the research. Second, the remaining nine findings are elucidated. Third, the meso-level propositions are recapped as building blocks for a formal code of change. Fourth, the theoretical, methodological, empirical and practical contribution of the research is appraised. Lastly, limitations of the research are discussed and suggestions for potential future research are made.

9.2. Main findings from research

In order to crack the code of change, Chapters 1, 2 and 4 considered the types of approach and evidence that would be required to achieve this. Suggestions drawn from the literature urged that there should be deep submersion in the process by a scholar-practioner, in real-time, over prolonged periods, in the field, maintaining persistent contact with actors and an openness to review change from multiple actors perspectives and not just from those at the top. Further, such research should adopt a multiple levels of analysis approach in order to discern rich, novel and hopefully surprising patterns that explain *how and why organisation change happens*.

The challenge was answered by designing a real-time, longitudinal, single case, ideographic study which was approached from an emic perspective. The case was an extreme and revelatory case in that it matched the conditions of a CAS. Conditions included high levels of *dynamic interaction*, *heterogeneity*, *interdependence* and *adaptive tension* amongst actors. The case enabled a unique opportunity to gather rich, thick data from within a nationally-based industry-level organisation in an established financial services sector. Such access is usually not available to scholars/academics. The longitudinal instance of change that served as case for in-depth study encompassed policy, strategy, operational and administrative aspects, ensuring relevance to mainstream scholarship and practice in organisation theory and change management. The

case helped develop insight into how and why change happens and helped to advance the code of change.

For clarity, in this research, to crack the code of change meant to puzzle out, discover, solve, or reveal the mystery of **how and why organisation change happens**, through considerable effort and whilst being immersed within an instance of change. To understand, interpret and explain what goes on in detail during and between the phases of change contributes to a cracking of the code of organisation change. This deep understanding also presents the opportunity to provide a response to the practical question posed by Andrew Leighton to those gathered at the Harvard Business School conference - *how to get people to do things for them willingly, and well who are just ordinary people.* The "Ten Take Outs'' collectively represent the code.

9.3. "Ten Take Outs" from the research

The ten main findings of the study are presented below. The first main finding represents a summary of the dynamic processes per phase.

9.3.1. Finding One: On-going dynamics, within and between phases: No step by step recipe guaranteeing change

To explain how and why change (reweaving of actor's beliefs and habits of action […] that leads to ongoing shifts in choices by the organisation) emerges, numerous dynamics at different levels of analysis are at play. There are micro-level processes at the intra-personal, individual, dyad and group levels that influence macro organisation-level phase outcomes. The dynamics typical of each of the phases are specified per phase (including the conditions at each phase that influence process towards the next phase or regression to previous phase). These on-going dynamics with a description of each process/dynamic were summarised in Tables 8.1. to 8.8.

9.3.2. Finding Two: Leaders "in charge"cannot predict and manage change: The illusion of control

Managing change usually arises from a perspective of managers desiring to control and predict change. They have predefined notions, solutions and outcomes that they wish recipients to adopt. Hence the observation from Andrew Leighton, "*And certainly you have not been able to*

get to the bottom of it, to teach people how to get people to do things for them willingly, and well who are just ordinary people. And that is the code to crack" (Beer & Nohria, 2000, p.172).

Whilst there is a recognition that people are crucial in the change process, the perspective of *"getting people to do things willingly"* may be interpreted as – manipulating people to do what managers have already planned. The manager's dilemma is then framed as - once managers know what is to be done, their biggest challenge is to get people to willingly do things for them [the hierarchical leaders].

The research evidence indicates that the hierarchical leaders (even the ones who initiate change) cannot control or predict change outcomes. From a process ontological view, change is an on-going phenomenon that fashions organisational becoming and is a result of choices, chance and unintended consequences (MacKay & Chia, 2013; Tsoukas & Chia, 2002).

Although outcomes cannot be predicted, the processes that bring about change can be predicted (Marion & Uhl-Bien, 2001). This study provides support for this conjecture.

9.3.3. Finding Three: Dissonance is a necessary factor: Knowing when to turn the heat on is important

As noted, change is an on-going phenomenon that aids in organisation becoming and organisation drift (Chia, 2014; Quattrone & Hopper, 2001). Actors at all levels continuously assess what is going on in the environment and what is happening internally and respond with ideas and solutions that they believe must address their perceived discrepancy.

The results show that the trigger for change is this perceived discrepancy. Leaders should be aware of the *"ants in my pants"* dynamic, both from a perspective of influencing (sensegiving) and being mutually influenced (sensemaking). The signs are the influence-seeking dynamics of *"Friends, Romans, countrymen, lend me your ears".* Without an increasing perceived discrepancy (change belief) and an increasing intrapersonal dissonance, the status quo will remain. This research suggests that the *"ants in my pants"* dynamic is a necessary condition for the Disequilibrium phase to emerge.

Actors should be aware of the need to "turn the heat on" (i.e., the need to increase dissonance) at appropriate times as an important dynamic in the change process. *"Setting the cat amongst the pigeons"* could be a useful tactic to increase dissonance. Forced exposure to new information that challenges change beliefs (e.g., discrepancy and appropriateness), results in increasing dissonance.

9.3.4.   Finding Four: Seek like-minded actors: Birds of a feather do flock together

Seeking to influence others is normal when there are heightened levels of dissonance (Festinger, 1957). As humans we seek for consistency (consonance) and reaching out to others *(*i.e., the *"Friends, Romans, countrymen, lend me your ears…"* dynamic) and getting them to share change beliefs is a way to reduce dissonance. Actors could influence the emergence of a Disequilibrium state by seeking out other actors with shared mental models. Actors should be aware of dynamics such as *"two peas in a pod"* and *"love is blinding"* that aid in building coalitions. Actors seeking Disequilibrium conditions should lobby those with shared mental models. This could result in developing a coalition through the *"birds of a feather flock together"* dynamic.

9.3.5.   Finding Five: Every interaction matters: The butterfly effect

Actors who experience high levels of dissonance through tactics such as *"setting the cat amongst the pigeons"* require engagement to make sense of respective change beliefs (e.g., appropriateness of a solution). Thus to reweave actors webs of beliefs and habits of action to accommodate new experiences requires on-going dynamic interaction. Dynamic interaction means staying open to influence and being influenced.

Dynamic interaction also means that change cannot be controlled. Based on the interactions change beliefs could shift and be reshaped. As seen in the case ***every dialogue matters***, as small changes over time may have massive consequences (the butterfly effect). Those who have initiated processes should also stay open to being influenced by the thoughts and ideas presented by others.

9.3.6. Finding Six: Interactions can be draining: Many heads make heavy work

Although interactions matter and are the mainsprings for how change emerges (i.e., reweaving/reshaping of actors webs of beliefs and habits of action), interactions can be energy-sapping, frustrating and time-consuming, as seen in the case. This is as a result of complexity. In Kaufmann's (1993) terms, as more actors (N) enter into the process, there are different ideas, values, notions, needs and change beliefs. There are different, schemata/mental models. Through increasing interaction/engagement (K), the intention is to align to achieve common schemata (P). Of the five change beliefs there are 3 primary change beliefs that are fundamental to influence the emergence of common schemata and buy-in across different actors and systems (C).

9.3.7. Finding Seven: Seek to influence 3 important change beliefs (the transformation waltz) through 3 related complex change skills

The 3 change beliefs that are fundamental to influence are *discrepancy, appropriateness of solution/s* and *appropriateness of the proposed way forward*. To achieve correlation (common understanding) these 3 beliefs have to be addressed in sequence. As evidenced in the case if the *discrepancy* is not clearly understood by actors, they will return to this on an on-going basis even after years of engagement. At times the problem is ill-defined (i.e., novel, not easy to grasp, may be construed in different ways) and other times the problem is not understood or accepted as a result of dissonance. Actors will as a result of dissonance reduce the importance of the matter *("water down matters")* or misunderstand/misinterpret information (i.e., get their *"knickers in a knot").* All of this makes spending time and reaching a common understanding of the discrepancy (i.e., *"getting onto the same page"*) ever more important.

"Rushing to solutions" should be avoided as long as there is no correlation on the *discrepancy.* If solutions are tabled prematurely the *appropriateness of the solution* will be continuously questioned as a result of the above mentioned dynamics. For clarity, it's not the belief about the do-ability of the solutions but rather it's appropriateness to the discrepancy being discussed that is questioned. Once there is correlation and buy-in to the discrepancy, only then should solutions be posited and appropriateness tested (i.e., pursuing *"shedding light on the options")* dynamics.

Lastly, at each step, the *appropriateness of the way forward* (the next steps) should be agreed. Skipping the sequence will result in on-going differences of change beliefs and will hamper the engagement process. The 3 complex change skills are posited in order to progress correlation and buy-in faster. To facilitate correlation and buy-in, 3 complex change skills namely: *complex problem solving*, *solution construction* and *social skills* are suggested to enable the transformation waltz (correlation and buy-in on the 3 most key change beliefs). The skills are used in tandem.

The study posits that the greater the level of complex change skillsets the more likely that there is a shorter Disequilibrium and Tension and Threshold phase, the more likely that Emergence could occur sooner (but not necessarily so - due to the nature of dynamic interactions, inlcudng hidden agendas, fixation on solutions etc.).

9.3.8. Finding Eight: Virtuous and vicious dynamics: 2 related sets of behaviours (model 1 and model 2)

Based on the operation of the above skills or lack of operation thereof, two primary sets of outcomes may arise namely increased correlation and buy-in or heightened conflict, mistrust and decreasing buy-in. Where the complex change skill sets are in operation, there are specific governing values, strategies, behaviours and resultant consequences that will be exhibited (Argyris,1993). Aside from consequences such as shifts in change beliefs (for e.g., clarity on the discrepancy, increasing valence and increasing efficacy) model 2 behaviours include those posited by Argyris (1993); Marion and Uhl-Bien (2001) and Lichtenstein and Plowman (2009).

These include:
- Attribution and evaluation illustrated with relatively directly observable data
- Surfacing conflicting views
- Encouraging public testing of evaluations
- Dropping seeds of emergence
- Thinking systemically
- Embracing uncertainty
- Encouraging rich interactions through a culture of "relational space"

- Supporting collective action

- Creating correlation through language and symbols

Figure 9.1.   **Causal Map Summary One**

Model 2
behaviours
exhibited during
these dynamics
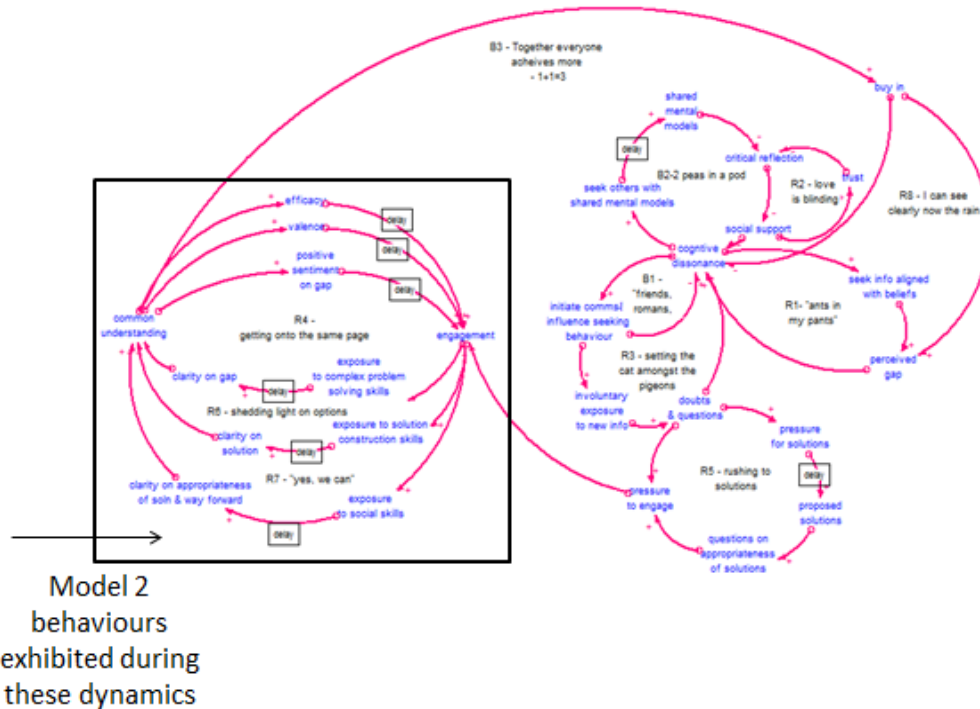
On the other hand, where complex change skills are not in operation, there are once again governing values, strategies, behaviours and resultant consequences. Consequences such as heightened conflict, mistrust and lack of buy-in have been observed.

Model 1 behaviours are also observed such as:

- Unillustrated attributions and evaluations

- Advocating courses of action which discourage inquiry

- Treating ones' own views as obviously correct

- Making covert attributions and evaluations

- Face-saving moves such as leaving potentially embarrassing facts unstated

The dynamic process models posited (Figure 9.1 and 9.2) thus align with previous research but contribute beyond this by identifying the cognitive skills as well as the posited model 1 and 2 behaviours and consequences, when the skills are in operations and when they are not.

Figure 9.2.   Causal Map Summary Two
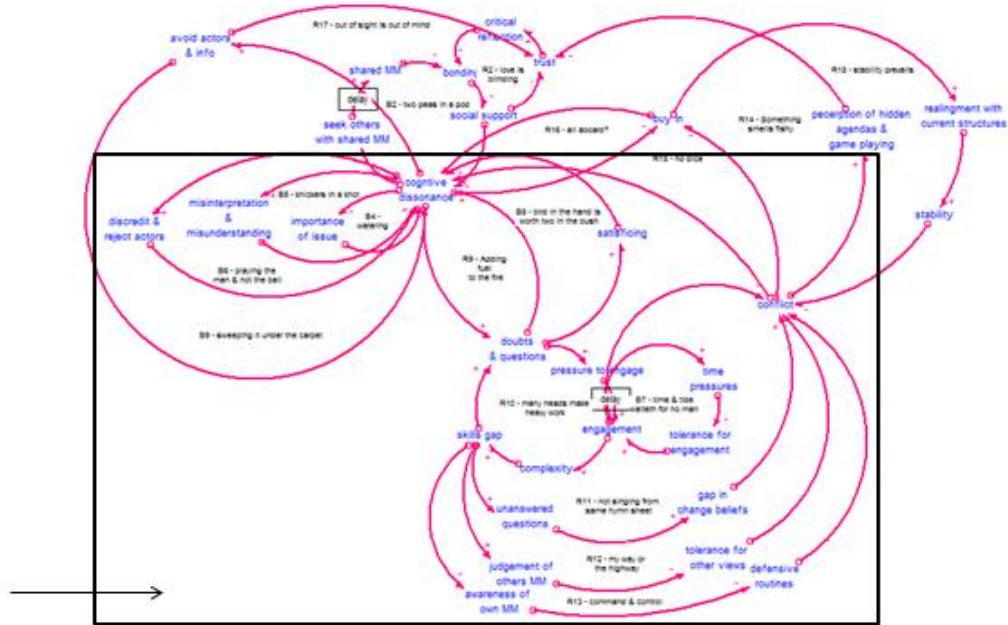
Model 1 behaviours exhibited
during these dynamics

9.3.9. Finding Nine: Heightened mistrust and conflict lead to the threshold event

The findings include evidence that increased mistrust and conflict (disharmony) arising through dynamics such as *"not singing from the same hymn sheet"*, *"command and control"* or *"my way or the highway"* will lead to a threshold event. To create emergent conditions, enabling leaders may use conflict as a means to get to the threshold event. Conflict is not seen as negative.

9.3.10. Finding Ten: Dissipation of tension: Knowing when to turn the heat off is just as important

The evidence reveals that enabling leaders mobilise actors outside the formal structures and seek to compromise. New coalitions emerge and members of older coalitions who do not support emerging solutions are avoided, bad-mouthed and rejected. The dynamics such as

"sweeping it under the carpet", *"out of sight is out of mind"* and *"playing the man and not the ball"* are observed. Knowing when to also "turn the heat off" is just as vital.

Summary of findings

Table 9.1. *Summary of the Top Ten "Take Outs"*

Main findings	Top Ten "Take-outs"
Finding One	On-going dynamics within and between phases: No step by step recipe guaranteeing change
Finding Two	Leaders "in charge"cannot predict and manage change: The illusion of control
Finding Three	Dissonance is a necessary factor: Knowing when to turn the heat on is important
Finding Four	Seek like-minded actors: Birds of a feather do flock together
Finding Five	Every interaction matters: The butterfly effect
Finding Six	Interactions can be draining: Many heads make heavy work
Finding Seven	Influence 3 important change beliefs (through the transformation waltz) & 3 related complex change skills to achieve this
Finding Eight	Virtuous and vicious dynamics: 2 related sets of behaviours (model 1 and model 2)
Finding Nine	Heightened mistrust and conflict lead to the threshold event
Finding Ten	Dissipation of tension: Knowing when to turn the heat off is just as important

9.3.11. Formal summary of code of change

The summary in Tables 9.2-9.6. represents the formal meso-level theory and code of change.

Table 9.2. *Formalised Code of Change: Disequilibrium Phase*

Propositions related to the Disequilibrium Phase
Proposition 1a: The greater the perceived discrepancy by an actor, the greater the search by such actor for information motivating the discrepancy and the greater the actor's cognitive dissonance. The more the actor experiences cognitive dissonance, the more likely is the actor to influence the formation of an aggregate.
Proposition 1b: The greater the cognitive dissonance, the more actors influence other actors, the more likely that aggregation will occur.
Proposition 1c: The more actors reach out to others with shared mental models, the greater the support for movement away from the status quo, the greater the bonding between these actors and the more likely aggregation will occur.

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Propositions related to the Disequilibrium Phase
Proposition 1d: The greater the social support between actors, the more they trust each other and do not challenge the perceived discrepancy, and the more likely they will bond and aggregation will occur.
Proposition 2: The more actors aggregate, the more they influence the system towards a Disequilibrium State.
Proposition 3: Aggregation is a necessary condition for the initiation and intensifying of a Disequilibrium condition.
Proposition 4: The more that other actor's cognitive dissonance increases through forced exposure to new information that challenges the status quo, the more likely a Disequilibrium state will be achieved.
Proposition 5a: The more actors engage and are exposed to complex problem solving skills, the more they clarify the discrepancy and develop positive sentiment on the gap, and the more actors resonate (develop correlation and buy-in).
Proposition 5b: The more actors engage in the change process and are exposed to solution construction skills, the more they obtain clarity on the solutions, develop valence and the more actors will resonate.
Proposition 5c: The more actors engage in the change process and are exposed to complex social skills, the more they clarify the appropriateness of solutions and way forward and develop greater efficacy. The greater the efficacy, the more actors resonate.
Proposition 5d: The simultaneous exposure to complex change skills is a necessary condition for resonance.
Proposition 6: The greater the resonance between initial coalition members, the more the system tends towards Disequilibrium.
Proposition 7: Resonance among initial coalition members is a necessary condition in order to achieve a Disequilibrium state.
Proposition 8: The greater the resonance the more that meta-aggregation occurs.
Proposition 9: The more meta-aggregation occurs, the greater the intensifying of a Disequilibrium state.
Proposition 10: The authority (decision making power) of the meta-aggregate is a sufficient condition for the establishment of a Disequilibrium state.

Table 9.3.　　　*Formal Code of Change: Tension and Threshold Phase*

Propositions related to the Tension and Threshold Phase
Proposition 11a: The greater the cognitive dissonance, the more actors reduce the importance of the information they are exposed to, the more doubts and questions on core change beliefs grow. **Proposition 11b:** The greater the cognitive dissonance, the more actors misinterpret and misunderstand information they are exposed to, the more doubts and questions on core change beliefs increase. **Proposition 11c:** The greater the cognitive dissonance, the more actors badmouth, discredit and reject actors who present the new information, the more doubts and questions on core change beliefs increase. **Proposition 12:** As cognitive dissonance of actors increases, the more likely disharmony will be reached. **Proposition 13a:** As doubts and questions on the core change beliefs increase, the more engagements increase, the more new actors and their needs are brought into the process. As new actors and their needs increase, the greater the complexity and the greater the change skills gap. As the skills gap increases, the greater the shift towards disharmony. **Proposition 13b:** The greater the change skills gap, the more actors' questions remain unanswered, the greater the gap in change beliefs, the greater the conflict. The greater the conflict the more the system tends towards disharmony. **Proposition 13c:** The greater the change skills gap, the more actors judge other actors mental models and the less tolerance for other views, which grows conflict. The greater the conflict the more the system tends towards disharmony. **Proposition 13d:** The greater the change skills gap, the less actor's awareness of their own mental models, the more they exercise defensive routines. The greater the defensive routines, the greater the conflict. The greater the conflict the more the system tends towards disharmony. **Proposition 13e:** As engagements increase, time pressure increases and change leader's tolerance to engage decreases. As tolerance to engage decreases, the greater the conflict. The greater the conflict the more the system tends towards disharmony. **Proposition 13f:** As conflict increases, the greater the perception of hidden agendas and game-playing, the lower the trust and the greater the conflict. The greater the conflict the more the system tends towards disharmony. **Proposition 14:** The greater the disharmony, the more the system will tend towards a tension and threshold condition. **Proposition 15:** Heightening disharmony is sufficient for the system to tend to a tension and threshold condition. **Proposition16a:** Disharmony is a necessary condition for new meta-aggregates to form.

Propositions related to the Tension and Threshold Phase
Proposition 16b: The formation of new meta-aggregates pushes the system towards a tension and threshold condition.

Table 9.4.   Formal Code of Change: Emergence Phase

Propositions related to the Emergence/Recombination Phase
Proposition 17: The greater the disharmony, the greater the cognitive dissonance of actors, the more doubts and questions (on core change beliefs) increase. The greater the doubts, the more actors will satisfice and the greater the entanglement.
Proposition 18: The greater the entanglement, the more the system will be pushed towards emergence.
Proposition 19: The more the cognitive dissonance of the actors is decreased, the more they buy-in to the satisficed solutions, the more that emergence will occur.
Proposition 20a: The more actors support revised satisficed solutions, the more these actors mobilise into a new structure/coalition (i.e., the more re-aggregation will occur).
Proposition 20b: The more re-aggregation occurs, the geater the tendency of the system towards emergence.
Proposition 21: The more entanglement and re-aggregation occurs, the greater the tendency of the system towards emergence.

Table 9.5.   *Formal Code of Change: Stabilising Feedback Phase*

Propositions related to the Stabilising Feedback Phase
Proposition 22a: The more actors who do not support the emergent solutions and structures push back to retain older solutions and structures, the more the administrative structure avoids these actors and/or the information they provide, the more likely that the older coalition disaggregates.
Proposition 22b: The more actors from the old coalition are rejected, discredited and bad-mouthed, the more likely disaggregation will occur.
Proposition 22c: The more actors from the old coalition are avoided, the more trust decreases and older coalition actors grow increasingly critical and unsupportive of the new coalition. The more the older coalition decreases support, the more likely disaggregation will occur.
Proposition 22d: The greater the disaggregation of the older unsupportive coalition, the more the new emergent order is stabilised in the system.

Propositions related to the Stabilising Feedback Phase
Proposition 23: The more that the administrative structures formalise the new emergent solution; the more the new emergent order is stabilised in the system.

Table 9.6. *Formal Code of Change: General Propositions*

General propositions
Proposition 24a: The more the conditions for each phase (Dis-equilibrium state, Tension and Threshold, Recombination/Self-organization and Stabilizing Feedback) are met, the more likely the initiation of the next phase dynamics.
Proposition 24b: The less the conditions for each phase (Dis-equilibrium state, Tension and Threshold, Recombination/Self-organization and Stabilizing Feedback) are met, the more likely the regression to the previous phase.
Proposition 24c: The greater the level of complex change skillsets the shorter the Disequilibrium and Tension and Threshold phase and the sooner Emergence is likely to occur.

9.4. Research contribution

The findings of this study make a contribution to the extant body of theoretical knowledge on organisation change. This has been discussed in Chapter 8. In addition, the findings have important implications for practice. The overall approach adopted for this research is considered to make an important methodological contribution as well.

9.4.1. Methodological contribution

This study also contributes to social science from a methodological and empirical perspective.

Pettigrew et al. (2001, p. 697) argue that "whereas progress is being made by organisational and management scholars, the organisational change literature remains underdeveloped regarding six interconnected analytical issues".

These issues include:

i. The examination of multiple contexts and levels of analysis in studying organisational change;

ii. The inclusion of time, history, process, and action;

iii. The link between change processes and organizational performance outcomes;

iv. The investigation of international and cross-cultural comparisons in research on organisational change;

v. The study of receptivity, customization, sequencing, pace, and episodic versus continuous change processes; and

vi. The partnership between scholars and practitioners in studying organizational change.

This research study addresses five of the above analytical issues. Item iii. is not addressed. In order of the above listed matters (excluding item iii):

First, the research contributes methodologically by providing a rich, thick descriptive narrative on change. The context refers to an industry level organisation in interface with many other entities, including private profit seeking companies and public policy-making bodies. The research demonstrates how stories, narratives, discourses, mental models, sensemaking, sensegiving and complexity perspectives can be combined to provide a richer, deeper, dynamic, meso-level process understanding of change. The research thus explicitly examines an instance of change across multiple levels of analysis, within a spelled-out context.

Second, the research presents a real-time, longitudinal case study conducted over 3 years. A strong process ontology is adopted. The research draws attention to actions and formal and informal interactions. It surfaces what happens in the "spaces between" (Lichtenstein & Plowman, 2009).

Third, the research contributes by adding to the body of empirical data a South African (non-American, non-European) case, involving a multi-ethnic and culturally diverse cast of actors.

Fourth a continuous ontology of change is adopted and time and temporality are taken seriously, as motivated by Dawson (2014).

Lastly, the researcher collected real-time qualitative data as a scholar-practitioner (an insider). The researcher had contextual insight that aided in the interpretation of events. The research

thus makes an important innovative contribution from both methodological and empirical perspectives.

Additionally, the research contributes by using innovative interpretation and analytic tools such as Atlas.ti for data management and analysis, visual mapping strategies to aid understanding - such as system dynamics techniques (causal loop diagrams) to map feedback loops and diagrammatic representation of complex results.

9.4.2. Practical contribution

This study and its findings present a practical set of tools and cues for practitioners. Although change cannot be predicted and controlled due to its inherent complexity (on-going human interactions, differing needs, assumptions and changing beliefs), its processes and related patterns can be understood and anticipated. Practitioners can use the themes described within the processes to make sense of and reflect on the everyday conversations and interactions during change.

More practically, this could include the following contexts and related cues and tactics.

Table 9.7.   *Practical Tools and Tactics for Practitioners*

Context, Cues & Tactics	
Context	**Actors (including oneself) pushing for ideas and/or problems to be pursued**
Conversational cue	Recognise dynamics such as:
	• *"Ants in your pants".* Be aware of confirmation biases – evidence that stacks up only in the favour of what is being presented.
	• *"Friends, Romans, Countrymen, lend me your ears…".* Be aware of influence seeking.
Tactics/Tools	• Play devil's advocate. See problems in terms or what is being proposed as well as opportunities (see the glass as half full and half empty). Be critical.
	• Practice complex problem solving skills (e.g., be clear on the discrepancy. Is there evidence for what you are saying/suggesting?). Do not be tempted to "*rush to solutions*".
	• Practice social skills (e.g., reflect on one's own change beliefs and attempt to see it from another actor's perspective. From a conceptual and principle perspective,

Context, Cues & Tactics	
	question why this would be good for the system).
Context	**Desire to move away from status quo**
Conversational cues	Recognise dynamics such as:
	• *"Adding fuel to the fire"* – increasing discomfort for others
	• *"Two peas in a pod and love is blinding"* – mobilising coalitions
Tactic/Tools	• Create increasing dissonance by exposing actors to new information that challenges the status quo (use the "*set the cat amongst the pigeons*" tactic).
	Increasing dissonance causes action.
	• Seek out others with shared mental models and shared beliefs on change. Use the *"birds of a feather flock together"* tactic
Context	**During interactions and engagements**
Conversational cue	Recognise dynamics such as:
	• *"Not singing from the same hymn sheet".* Be aware of actors who have differing change beliefs.
	• *"Command and control"; "My way or the highway"* – responses that lead to growing conflict
	• *"Something smells fishy"* – growing mistrust by actors
Tactic/Tools	• Pause, reflect and give actors the opportunity to share their beliefs on the change. This is not however opportunity to be " soft" (i.e., to stop questioning or being critical of what is being suggested). Challenge openly but respectfully (*"play the ball and not the man").*
	• Practice the "Transformation Waltz". Return to clarifying in sequence the problem, the appropriateness of the solution presented and the appropriateness of the way forward in sequence.
	• Practice complex problem solving, social construction and social skills. Help bring increasing clarity to the change beliefs through bona fide *"sensemaking and sensegiving"* routines.
	• Be aware of silenced voices (forced compliance). Seek out suspended voices.

	Context, Cues & Tactics
Context	**Increasing doubts and questions**
Conversation cues	Recognise dynamics such as:

- *"Watering down matters"* – decreasing the importance of matters

- *"Knickers in a knot"* – misinterpreting and misunderstanding information

- *"Playing the man and not the ball"* – badmouthing, rejecting and discrediting actors

(Note: these behaviours are easily construed as resistance to change (a poor attitude to change. The underlying competing cognitive elements are missed).

Tactic/Tools	• As tempting as it may be to reciprocate and equally for e.g., badmouth and reject actors who are involved in the above dynamics – stay clear of these behaviours.

Do not commit the fundamental attribution error. Return to seeing matters at the system level.

- Return conscientiously to the "Transformation Waltz". Relentlessly practice the 3 complex change skills.

Context	**Heightened disharmony, a threshold event and informal mobilising**
Conversational cues	Recognise dynamics such as:

- *"No dice"* - decreasing buy-in and increasing discomfort

- *"Sweeping it under the carpet"* – avoiding information presented and/or actors

- *"Out of sight is out of mind"* – rejecting "difficult"actors

- *"Watering down matters"* – decreasing the importance of matters

- *"Knickers in a knot"* – misinterpreting and misunderstanding information

- *"Playing the man and not the ball"* – badmouthing, rejecting and discrediting actors

Tactic	• Move swiftly to create enabling conditions for rich engagements. Allow for ideas, solutions to emerge from actors. Be the enabling agent.

- Dissipate tension (turn down the heat) by compromising if there is sufficient buy-in from actors on a particular structure or solution. Adopt the tactic *"a bird in the hand is worth two in the bush".* Do not continuously play hard ball.

9.5.   Limitations and future research suggestions

Six limitations and related suggestions are made. First, the meso-level propositions induced from the research should be tested in future research. Further cases should be reviewed to test whether and to what extent the conditions and propositions hold.

Second, the research did not review where the complex change skills sets may be present but not in operation. The researcher posits that further testing may reveal that operation of change skill sets is influenced by presence of shared mental models and/or support from powerful actors. This should be tested in future research.

Third, future research should review whether and how the complex change skills can be developed. These skills are posited as the fundamental capabilities to move through phases of change more effectively. The suggestion is that these skills cannot be learnt except *in situ*.

Fourth, the case stopped after buy-in was received to pursue a particular solution (Service D). The case did not follow the development of the solution into development and implementation phase to see if the buy-in was sustained or if the change regressed to earlier stages. Future research could either follow the case (albeit retrospectively) or follow cases through to implementation.

Fifth, the utility of socio-cognitive theory to the change domain has been demonstrated. Although social-cognitive theory has been utilised, much of the explanation has been based on dissonance theory and to some extent learning theories (such as double loop learning). More work using theories from psychology that explain individual and group motives and behaviours that explain organisation level outcomes may present fertile areas for future research. More work focusing on the dynamics of power and resistance (as conceptualised under critical practice theory) is encouraged.

Lastly, although a causal loop model was posited, this analytic technique has inherent weaknesses. A stock and flow model should be built by transforming the causal loop model using mathematical rules for transformations. Future research could utilise the current CLD to

develop a stock and flow model. What could become clear are nodes that are stocks (e.g., dissonance is a stock variable – it builds up or can reduce stock when actors are involved in dissonance reducing behaviours (out flows). Processes leading to heightened conflict could be inflows to the stock variable conflict. This could be a fruitful area of work utilising an elegant technique.

9.6.   Conclusion

A (proto) dynamic meso-level theory of change in service of action has been presented. A theoretical understanding of ***how and why organisational change happens*** has been posited. The research has optimistically covered some distance in advancing the code of change. Change is an everyday on-going phenomenon and all organisational actors need a practical set of cues, tools/tactics to influence continuous reweaving of beliefs and habits of action. This research has taken a "gentle" step towards providing this.

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Note: Papers flagged with a * make up the list of 105 papers selected for the systematic literature review.

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11. Appendices

Appendix A – Record of Case Study Database

Table A11.1   *Chronological listing of filenames for all data collected*

Number	Month	Format of artefact	File Name
0001	2010	Doc	C1_0001_2011JAN_SECONDARY_ STAKEHOLDER RESPONSE Escalation to REGCO
0002	July 2010	Doc	C1_0002_2011JAN_SECONDARY_TOP MANAGEMENT RESPONSE_ Letter to REGCO on Directive - July2010
0003	Jan 2011	PPT	C1_0003_2011JAN_STEERING COMMITTEE INTERACTION_PRESENTATION_ Issues - Workshop with REGCO v 1.1
0004	Jan 2011	Doc	C1_0004_2011FEB_STEERING COMMITTEE INTERACTION_RESEARCHER REFLECTION_ Initial Session
0005	Feb 2011	Email	C1_0005_2011FEB_SECONDARY_EMAIL_ Draft Discussion Paper
0006	Feb 2011	Email	C1_0006_2011FEB_WORKING GROUP INTERACTION_EMAIL_ Draft Discussion Paper
0007	Mar 2011	Doc	C1_0007_2011MAR_WORKING GROUP INTERACTION_TOP MANAGEMENT RESPONSE_ - REGCO and THINKCO Discussion Paper Draft
0008	Mar 2011	Email	C1_0008_2011MAR_WORKING GROUP INTERACTION_EMAIL_RE - REGCO and THINKCO Discussion Paper REGCO Comments doc
0009	Mar 2011	Doc	C1_0009_2011MAR_WORKING GROUP INTERACTION_TOP MANAGEMENT RESPONSE_ - REGCO and THINKCO Discussion Paper REGCO Comments 28-03-2011
0010	Apr 2011	Email	C1_0010_2011APR_ STEERING COMMITTEE INTERACTION _EMAIL_ Issues_ Email to Steerco
0011	Apr 2011	Doc	C1_0011_2011APR_STEERING COMMITTEE INTERACTION_INDUSTRY RESPONSE_ Industry Discussion Paper v 1
0012	May 2011	Doc	C1_0012_2011MAY_STEERING COMMITTEE INTERACTION_EMAIL_Cover letter to industry
0013	May 2011	Email	C1_0013_2011MAY_WORKING COMMITTEE INTERACTION_EMAIL_04-05-2011-FW Industry Discussion Paper v 1_1
0014	May 2011	Email	C1_0014_2011MAY_WORKING GROUP INTERACTION_EMAIL_ 04-05-2011-FW Industry Discussion Paper v 1_1
0015	May 2011	Email	C1_0015_2011MAY_WORKING GROUP INTERACTION_EMAIL _04-05-2011-Re Industry Discussion Paper v 1_1
0016	May 2011	Email	C1_0016_2011MAY_STEERING COMMITTEE INTERACTION_EMAIL _27-05-2012-RE Extension to deadline and additional note on context
0017	May 2011	Doc	C1_0017_2011MAY_ STAKEHOLDER INTERACTION_STAKEHOLDER RESPONSE_27-05-2011- Response-FW repositioning
0018	June 2011	Doc	C1_0018_2011JUN_ INDUSTRY INTERACTION_INDUSTRY RESPONSE_FEEDBACK ON PHILOSOPHIES
0019	June 2011	Doc	C1_0019_2011JUN_STAKEHOLDER INTERACTION_STAKEHOLDER RESPONSE_FEEDBACK ON PHILOSOPHIES
0022	June 2011	Doc	C1_0020_2011JUN_STAKEHOLDER INTERACTION_STAKEHOLDER RESPONSE_FEEDBACK ON PHILOSOPHIES
0023	June 2011	Email	C1_0023_2011JUN_STAKEHOLDER INTERACTION_EMAIL_21-06-2011-RE Proposal regarding THINKCO strategies
0024	June 2011	Email	C1_0024_2011JUN_STAKEHOLDER INTERACTION_EMAIL_21-06-2011-RE Proposal regarding THINKCO strategies
0025	June 2011	Doc	C1_0025_2011JUN_ INDUSTRY INTERACTION_INDUSTRY

			RESPONSE_FEEDBACK ON PHILOSOPHIES
0027	June 2011	Email	C1_0027_2011JUN_WORKING GROUP INTERACTION_EMAIL_21-06-2011-RE Issues
0028	Jul 2011	Email	C1_0028_2011JUL_WORKING GROUP INTERACTION_EMAIL_19-07-2011-RE Issues
0029	Jul 2011	Email	C1_0029_2011JUL_INDUSTRY INTERACTION_EMAIL_LETTER
0030	Aug 2011	Email	C1_0030_2011AUG_WORKING GROUP INTERACTION_EMAIL__11-08-2011-Update Issues
0031	Aug 2011	Email	C1_0031_2011AUG_TOP MANAGEMENT INTERACTION INTERACTION_EMAIL__16-08-2011- ISSUES PRESENTATION FOR DISCUSSION
0032	Aug 2011	PPT	C1_0032_2011AUG_TOP MANAGEMENT INTERACTION_PRESENTATION_ Issues Response Summary and Way Forward
0033	Aug 2011	Doc	C1_0033_2011AUG_TOP MANAGEMENT INTERACTION_INFORMAL CONVERSATION
0034	Aug 2011	Doc	C1_0034_2011AUG_WORKING GROUP INTERACTION_INFORMAL CONVERSATION
0035	Sept 2011	PPT	C1_0035_2011SEP_TOP MANAGEMENT INTERACTION_PRESENTATION _Steerco Presentation v 1.0
0036	Sept 2011	PPT	C1_0036_2011SEP_WORKING GROUP INTERACTION_PRESENTATION _ Issues – Steerco Presentation v ms
0037	Sept 2011	Doc	C1_0037_2011SEP_STAKEHOLDER INTERACTION_EMAIL_INTECON ITEM LIMITS
0038	Oct 2011	PPT	C1_0038_2011OCT_STEERCO INTERACTION_PRESENTATION Issues – Steerco Presentation v FINAL
0039	Oct 2011	Email	C1_0039_2011OCT_WORKING GROUP INTERACTION_EMAIL_06-10-2011-Updated presentation
0040	Oct 2011	Doc	C1_0040_2011OCT_STEERCO INTERACTION_RESEARCHER REFLECTION
0041	Oct 2011	Doc	C1_0041_2011OCT_STEERCO INTERACTION_MINUTES Key Actions List (from Steerco) – 7 October 2011
0042	Oct 2011	Email	C1_0042_2011OCT_WORKING GROUP INTERACTION_EMAIL _11-10-2011-Re Review - Legal Framework
0043	Oct 2011	Email	C1_0043_2011OCT_WORKING GROUP INTERACTION_EMAIL_13-10-2011-Complaints
0044	Oct 2011	Doc	C1_0044_2011OCT_WORKING GROUP INTERACTION_INFORMAL COMMUNICATION_ Complaints
0045	Oct 2011	Email	C1_0045_2011OCT_WORKING GROUP INTERACTION_EMAIL_Actions
0046	Oct 2011	Email	C1_0046_2011OCT_WORKING GROUP INTERACTION_EMAIL_Actions
0047	Oct 2011	Email	C1_0047_2011OCT_WORKING GROUP INTERACTION_EMAIL
0048	Oct 2011	Doc	C1_0048_2011OCT_WORKING GROUP INTERACTION_ INFORMAL COMMUNICATION
0049	Nov 2011	Email	C1_0049_2011NOV_INDUSTRY INTERACTION_EMAIL _02-11-2011-RE Discussion on
0050	Nov 2011	Email	C1_0050_2011NOV_INDUSTRY INTERACTION_EMAIL _07-11-2011-RE Discussion on
0051	Nov 2011	Email	C1_0051_2011NOV_INDUSTRY INTERACTION_EMAIL _10-11-2011-RE Discussion
0052	Nov 2011	Doc	C1_0052_2011NOV_DATA _Ranges_2
0053	Nov 2011	Email	C1_0053_2011NOV_WORKING GROUP INTERACTION_EMAIL_10-11-2011-RE FW Stats
0054	Nov 2011	Email	C1_0054_2011NOV_CEO INTERACTION_EMAIL_10-11-2011- Proposed changes
0055	Nov 2011	Doc	C1_0055_2011NOV_INDUSTRY INTERACTION_ INFORMAL CONVERSATION _ Proposed changes - draft Oct 11 2011
0056	Nov 2011	Email	C1_0056_2011NOV_TOP MANAGEMENT INTERACTION_INFORMAL

			DISCUSSION_ 11-11-2011-RE FW Stats
0057	Nov 2011	PPT	C1_0057_2011NOV_STEERING COMMITTEE INTERACTION_PRESENTATION _ Actions Update - Steerco Presentation Final
0058	Nov 2011	Doc	C1_0058_2011NOV_STEERING COMMITTEE INTERACTION_RESEARCHER REFLECTION
0059	Nov 2011	Doc	C1_0059_2011NOV_WORKING GROUP INTERACTION_INFORMAL DISCUSSION
0060	Nov 2011	Doc	C1_0060_2011NOV_WORKING GROUP INTERACTION_INFORMAL DISCUSSION
0061	Nov 2011	Email	C1_0061_2011NOV_INDUSTRY INTERACTION_EMAIL
0062	Nov 2011	Email	C1_0062_2011NOV_STEERING COMMITTEE INTERACTION_EMAIL_29-11-2011- Actions and way forward
0063	Dec 2011	Doc	C1_0063_2011NOV_STEERING COMMITTEE INTERACTION_TOP MANAGEMENT RESPONSE _REGCO Position Paper
0064	Dec 2011	Email	C1_0064_2011NOV_WORKING GROUP INTERACTION_EMAIL_ 14-12-2011-Re actions and way forward
0065	Jan 2012	Email	C1_0065_2011JAN_STEERCO INTERACTION_EMAIL _03-01-2012-FW actions and way forward
0066	Feb 2012	Doc	C1_0066_2011FEB_STEERCO INTERACTION_FIELD NOTES _03-01-2012-FW actions and way forward
0067	Mar 2012	Email	C1_0067_2012MAR_WORKING GROUP INTERACTION_EMAIL_ 09-03-2012-Re Meetings
0068	Mar 2012	Doc	C1_0068_2012MAR_ TOP MANAGEMENT INTERACTION_ INFORMAL CONVERSATION _REGCO Discussion Document 2012-02-27
0069	Mar 2012	Doc	C1_0069_2012MAR_ TOP MANAGEMENT INTERACTION_ INFORMAL CONVERSATION
0070	Mar 2012	Doc	C1_0070_2012MAR _INDUSTRY INTERACTION _PRESENTATION_ March Session
0071	Mar 2012	Doc	C1_0071_2012MAR _INDUSTRY INTERACTION _PRESENTATION_ REGCO Discussion Document March Session
0072	Mar 2012	Doc	C1_0072_2012MAR _ STAKEHOLDER INTERACTION _INFORMAL DISCUSSION_ JP
0073	Mar 2012	Doc	C1_0073_2012MAR _INDUSTRY INTERACTION _FIELD NOTES_ REGCO Discussion Document March Session
0074	Mar 2012	Doc	C1_0074_2012MAR _STAKEHOLDER INTERACTION _FIELD NOTES_ REGCO Discussion Document March Session
0075	Mar 2012	Doc	C1_0075_2012MAR _INDUSTRY INTERACTION _INFORMAL DISCUSSION
0076	Mar 2012	Email	C1_0076_2012MAR _INDUSTRY INTERACTION _INFORMAL DISCUSSION_ 22-03-2012-Re theres a reason
0077	Mar 2012	Email	C1_0077_2012MAR _STEERCO INTERACTION _EMAIL 23-03-2012-FW theres a reason
0078	Apr 2012	Email	C1_0078_2012APR _WORKING GROUP INTERACTION _EMAIL_02-04-2012-Doc and Presentation
0079	Apr 2012	Doc	C1_0079_2012APR _STAKEHOLDER INTERACTION _INFORMAL DISCUSSION_ Review Feedback
0080	Apr 2012	Doc	C1_0080_2012APR _STAKEHOLDER INTERACTION _INFORMAL DISCUSSION_ OFFLINE DISCUSSION
0081	Apr 2012	Email	C1_0081_2012APR _WORKING GROUP INTERACTION _EMAIL _11-04-2012-RE Review Feedback
0082	Apr 2012	Email	C1_0082_2012APR _WORKING GROUP INTERACTION _EMAIL _11-04-2012-RE Review Feedback
0083	Apr 2012	Email	C1_0083_2012APR _STAKEHOLDER INTERACTION _EMAIL_16-04-2012-Re
0084	Apr 2012	Email	C1_0084_2012APR _STAKEHOLDER INTERACTION _INFORMAL DISCUSSION
0085	Apr 2012	Email	C1_0085_2012APR _INDUSTRY INTERACTION _INFORMAL DISCUSSION - Re REGCO Discussion

0086	Apr 2012	Email	C1_0086_2012APR _INDUSTRY INTERACTION _INFORMAL DISCUSSION - Re REGCO Discussion
0087	Apr 2012	Email	C1_0087_2012APR _STAKEHOLDER INTERACTION _INFORMAL DISCUSSION_23-04-2012-RE Review Feedback
0088	Apr 2012	Email	C1_0088_2012APR _INDUSTRY INTERACTION _EMAIL_ 23-04-2012-Re Information REGCO Discussion Document and Presentation
0089	Apr 2012	Email	C1_0089_2012APR _STAKEHOLDER INTERACTION _INFORMAL DISCUSSION_24-04-2012-RE Review Feedback
0090	Apr 2012	Doc	C1_0090_2012APR _STAKEHOLDER INTERACTION _INFORMAL DISCUSSION
0091	May 2012	Email	C1_0091_2012MAY _STAKEHOLDER INTERACTION _EMAIL_08-05-2012-Re
0092	May 2012	Email	C1_0092_2012MAY _STAKEHOLDER INTERACTION _EMAIL_15-05-2012
0093	May 2012	Email	C1_0093_2012MAY _STAKEHOLDER INTERACTION _EMAIL_20-5-2012-FW Emailing Presentation response
0094	May 2012	Doc	C1_0094_2012MAY _STAKEHOLDER INTERACTION _ STAKEHOLDER RESPONSE
0095	May 2012	Doc	C1_0095_2012MAY _STAKEHOLDER INTERACTION _ STAKEHOLDER RESPONSE
0096	May 2012	Doc	C1_0096_2012MAY _STAKEHOLDER INTERACTION _ STAKEHOLDER RESPONSE _2012-05-29 Review Submission May
0097	May 2012	Doc	C1_0097_2012MAY _INDUSTRY INTERACTION _ INDUSTRY RESPONSE_ Review - feedback - May 2012
0098	May 2012	Doc	C1_0098_2012MAY _STAKEHOLDER INTERACTION _ STAKEHOLDER RESPONSE_ Review Strategy Feedback Final
0099	May 2012	Doc	C1_0099_2012MAY _STAKEHOLDER INTERACTION _ STAKEHOLDER RESPONSE _REGCO THINKCO Discussion Document and Final
0100	May 2012	Doc	C1_0100_2012MAY _STAKEHOLDER INTERACTION _ STAKEHOLDER RESPONSE _ Consumer Market Report Third Quarter September 2011
0101	May 2012	Doc	C1_0101_2012MAY _INDUSTRY INTERACTION _ INDUSTRY RESPONSE_ response
0102	May 2012	Doc	C1_0102_2012MAY _STAKEHOLDER INTERACTION _ STAKEHOLDER RESPONSE _Response to Document
0103	May 2012	Doc	C1_0103_2012MAY _STAKEHOLDER INTERACTION _ STAKEHOLDER RESPONSE_Review REGCO
0104	May 2012	Doc	C1_0104_2012MAY _STAKEHOLDER INTERACTION _ STAKEHOLDER RESPONSE_ Review_Feedback_May 2012
0105	May 2012	Doc	C1_0105_2012MAY _STAKEHOLDER INTERACTION _ STAKEHOLDER RESPONSE_Response to REGCO re Review - May 2012
0106	May 2012	Doc	C1_0106_2012MAY _INDUSTRY INTERACTION _ INDUSTRY RESPONSE _ CoverLetter_31052012
0107	May 2012	Doc	C1_0107_2012MAY _INDUSTRY INTERACTION _ INDUSTRY RESPONSE . FeedBack_31052012
0108	May 2012	Doc	C1_0108_2012MAY _INDUSTRY INTERACTION _ INDUSTRY RESPONSE_ Appendices_31052012
0109	May 2012	Doc	C1_0109_2012MAY _STAKEHOLDER INTERACTION _ STAKEHOLDER RESPONSE_Comments on proposed Review 31May12
0110	May 2012	Doc	C1_0110_2012MAY _INDUSTRY INTERACTION _ INDUSTRY RESPONSE_ Response
0111	May 2012	Doc	C1_0111_2012MAY _INDUSTRY INTERACTION _ INDUSTRY RESPONSE_Cover Letter Response
0112	May 2012	Doc	C1_0112_2012MAY _INDUSTRY INTERACTION _ INDUSTRY RESPONSE_ response 2012-05-31
0113	May 2012	Doc	C1_0113_2012MAY _INDUSTRY INTERACTION _ INDUSTRY RESPONSE_Response to REGCO discussion document
0114	May 2012	Email	C1_0114_2012MAY _STAKEHOLDER INTERACTION _ STAKEHOLDER RESPONSE_FW REGCO - Discussion Document and Systems March 2012
0115	May 2012	Doc	C1_0115_2012MAY _STAKEHOLDER INTERACTION _ STAKEHOLDER RESPONSE_REGCO_Review_March2012_Feedback

0116	May 2012	Doc	C1_0116_2012MAY _STAKEHOLDER INTERACTION _ STAKEHOLDER RESPONSE_Response to THINKCO Discussion Document - final1
0117	June 2012	Doc	C1_0117_2012MAY _INDUSTRY INTERACTION _ INDUSTRY RESPONSE _04-06-2012-FW Information Document REGCO Discussion Document
0118	July 2012	Email	C1_0118_2012JUL _INDUSTRY INTERACTION _ EMAIL__02-07-2012-RE Future of
0119	July 2012	Email	C1_0119_2012JUL _STAKEHOLDER INTERACTION _ EMAIL 06-07-2012-RE Communique iro Review
0120	July 2012	Doc	C1_0120_2012JUL _INDUSTRY INTERACTION _ EMAIL Comms to Industry REGCO
0121	July 2012	Doc(Excel)	C1_0121_2012JUL _WORKING GROUP INTERACTION _INFORMAL DISCUSSION_ RESPONSES Review
0122	July 2012	Doc	C1_0122_2012JUL _WORKING GROUP INTERACTION _INFORMAL DISCUSSION_ RESPONSES Review
0123	July 2012	Doc	C1_0123_2012JUL _CEO INTERACTION _INFORMAL DISCUSSION_ RESPONSES Review
0124	July 2012	Email	C1_0124_2012JUL _STAKEHOLDER INTERACTION _ EMAIL _25-07-2012-REQ TO MEET
0125	July 2012	Email	C1_0125_2012JUL _STAKEHOLDER INTERACTION _ EMAIL _25-07-2012-REQ TO MEET
0126	Aug 2012	Doc	C1_0126_2012AUG _STAKEHOLDER INTERACTION _ INFORMAL DISCUSSION _13-08-2012-REQ TO MEET
0127	Aug 2012	Email	C1_0127_2012AUG _STEERING COMMITTEE INTERACTION _ INFORMAL DISCUSSION_ meeting
0128	Aug 2012	Email	C1_0128_2012AUG _STEERING COMMITTEE INTERACTION _ INFORMAL DISCUSSION-RE meeting
0129	Aug 2012	Doc	C1_0129_2012AUG _WORKING GROUP INTERACTION _ RESEARCHER REFLECTION_ Summary
0130	Aug 2012	Doc	C1_0130_2012AUG _WORKING GROUP INTERACTION _ RESEARCHER REFLECTION_DRAFT PPT
0131	Aug 2012	Doc	C1_0131_2012AUG _WORKING GROUP INTERACTION _ INFORMAL DISCUSSION_DRAFT REPORT
0132	Aug 2012	Doc	C1_0132_2012AUG _WORKING GROUP INTERACTION _ RESEARCHER REFLECTION _DISCUSSION
0133	Aug 2012	Doc	C1_0133_2012AUG _CEO INTERACTION _ RESEARCHER REFLECTION _DISCUSSION
0134	Sep 2012	Doc	C1_0134_2012SEP _STEERING COMMITTEE INTERACTION _ PRESENTATION _DISCUSSION
0135	Sep 2012	Email	C1_0135_2012SEP _CEO INTERACTION _ EMAIL_ Feedback on meeting
0136	Sep 2012	Email	C1_0136_2012SEP _CEO INTERACTION _ EMAIL _12-09-2012-Collections Document for REGCO
0137	Sep 2012	Doc	C1_0137_2012SEP _CEO INTERACTION _ EMAIL_ Summary Strategic Considerations for Review September 2012
0138	Sep 2012	Doc	C1_0138_2012SEP _CEO INTERACTION _RESEARCHER REFLECTION_ Summary Strategic Considerations for Review September 2012 v3
0139	Sep 2012	Doc	C1_0139_2012SEP _CEO INTERACTION _INFORMAL DISCUSSION_ DISAGREE
0140	Sep 2012	Email	C1_0140_2012SEP _CEO INTERACTION _ EMAIL_ Review
0141	Sep 2012	Email	C1_0141_2012SEP _STEERCO INTERACTION _ EMAIL_17-09-2012- Review
0142	Oct 2012	Email	C1_0142_2012OCT _INDUSTRY INTERACTION _ EMAIL_03-10-2012-Review Feedback
0143	Oct 2012	Email	C1_0143_2012OCT _WORKING GROUP INTERACTION _ EMAIL_04-10-2012-Clarity

0144	Oct 2012	PPT	C1_0144_2012OCT _STEERING COMMITTEE INTERACTION _ PRESENTATION _Strategic Review of Collections
0145	Oct 2012	Email	C1_0145_2012OCT _CEO INTERACTION _ EMAIL_15-10-2012-Draft REGCO Presentation
0146	Oct 2012	Email	C1_0146_2012OCT _STAKEHOLDER INTERACTION_EMAIL
0147	Oct 2012	Doc	C1_0147_2012OCT _STAKEHOLDER INTERACTION_INFORMAL DISCUSSION
0148	Oct 2012	PPT	C1_0148_2012OCT _WORKING GROUP INTERACTION_PRESENTATION_ Review Presentation Oct 2012 v3 (4)
0149	Nov 2012	Doc	C1_0149_2012NOV _STEERING COMMITTEE INTERACTION_PRESENTATION_ Review Presentation Oct 2012 v3 (4)
0150	Nov 2012	Email	C1_0150_2012NOV _STEERING COMMITTEE INTERACTION_EMAIL_ 0150_08-11-2012- Steerco
0151	Nov 2012	PPT	C1_0151_2012NOV _STEERING COMMITTEE INTERACTION_EMAIL_Review Presentation Oct 2012 v 6
0152	Nov 2012	Email	C1_0152_2012NOV _STEERING COMMITTEE INTERACTION_EMAIL_RE Steerco
0153	Nov 2012	Doc	C1_0153_2012NOV _STEERING COMMITTEE INTERACTION_INFORMAL CONVERSATION_RE Steerco
0154	Dec 2012	Doc	C1_0154_2012DEC _STEERING COMMITTEE INTERACTION_INDUSTRY INTERACTION_RE Steerco
0155	Dec 2012	Doc	C1_0155_2012DEC _STEERING COMMITTEE INTERACTION_STAKEHOLDER INTERACTION_RE Steerco
0156	Dec 2012	PPT	C1_0156_2012DEC_INDUSTRY INTERACTION_PRESENTATION_Review Presentation 3 Dec 2012 FinalvAI
0157	Dec 2012	PPT	C1_0157_2012DEC _INDUSTRY INTERACTION_INFORMAL INTERACTION 11-11-12
0158	Dec 2012	Doc	C1_0158_2012DEC_INDUSTRY INTERACTION_INFORMAL INTERACTION 11-11-12_workshop
0159	Dec 2012	Email	C1_0159_ 2012DEC_INDUSTRY INTERACTION_EMAIL
0160	Dec 2012	Doc	C1_0160_ 2012DEC_INDUSTRY INTERACTION_INFORMAL INTERACTION Tele on process
0161	Dec 2012	Email	C1_0161_2012DEC_INDUSTRY INTERACTION_EMAIL_RE Workgroup
0162	Dec 2012	Doc	C1_0162_2012DEC_INDUSTRY INTERACTION_EMAIL_ 13-12-12-Re Requirements Work Session 3 - notes
0163	Dec 2012	Doc	C1_0163_2012DEC_STAKEHOLDER INTERACTION_INFROMAL INTERACTION_ Discussion
0164	Dec 2012	Doc	C1_0164_2012DEC_STAKEHOLDER INTERACTION_RESEARCHER REFLECTION_Thoughts from session
0165	Dec 2012	Email	C1_0165_2012DEC_STAKEHOLDER INTERACTION_EMAIL_ 23-12-2012-RE Strategic review of review
0166	Jan 2013	Doc	C1_0166_2013JAN_CEO INTERACTION_INFORMAL INTERACTION_ APPROACH TO IND SESSION
0167	Jan 2013	Doc	C1_0167_2013JAN_WORKING GROUP INTERACTION_INFORMAL INTERACTION_ APPROACH TO IND SESSION
0168	Jan 2013	PPT	C1_0168_2013JAN_TOP MANAGEMENT INTERACTION_PRESENTATION_ 0169_Review Presentation 18 Jan 2013 FinalvAI
0169	Jan 2013	Doc	C1_0169_2013JAN_TOP MANAGEMENT INTERACTION_INFORMAL DISCUSSION_APPROACH
0170	Jan 2013	PPT	C1_0170_2013JAN_INDUSTRY INTERACTION_PRESENTATION_ THINKCO Review 18 Jan 2013
0171	Jan 2013	Doc	C1_0171_2013JAN_INDUSTRY INTERACTION_PRESENTATION_ 18 Jan
0172	Jan 2013	Doc	C1_0172_2013JAN_WORKING GROUP INTERACTION_RESEARCHER REFLECTION_ CLARIFICATION NOTE
0173	Jan 2013	Doc	C1_0173_2013JAN_TOP MANAGEMENT INTERACTION_RESEARCHER REFLECTION_ POST MORTEM
0174	Jan 2013	Doc	C1_0174_2013JAN_WORKING GROUP INTERACTION_INFORMAL

			DISCUSSION_ TELECON
0175	Jan 2013	PPT	C1_0175_2013JAN_WORKING GROUP INTERACTION_PRESENTATION_ Jan 2013 v MSAI
0176	Jan 2013	Doc	C1_0176_2013JAN_STAKEHOLDER INTERACTION_PRESENTATION_ Jan 2013 v MSAI
0177	Jan 2013	Email	C1_0177_2013JAN_TOP MANAGEMENT INTERACTION _ INFORMAL DISCUSSION_ROOT CAUSE_RE Confidential
0178	Jan 2013	Email	C1_0178_2013JAN_STEERING COMMITTEE INTERACTION _ EMAIL_ Review - Progress Update and Requests
0179	Jan 2013	Email	C1_0179_2013JAN_STEERING COMMITTEE INTERACTION _ EMAIL_ REQUEST
0180	Jan 2013	Email	C1_0180_2013JAN_INDUSTRY INTERACTION _ EMAIL_30-01-2013-Re ACT Questions -
0181	Jan 2013	Email	C1_0181_2013JAN_STEERING COMMITTEE INTERACTION _ EMAIL_31-01-2013-FW Review - Progress Update and Requests
0182	Jan 2013	Email	C1_0182_2013JAN_INDUSTRY INTERACTION _ EMAIL_questions
0183	Feb 2013	Doc	C1_0183_2013FEB_INDUSTRY INTERACTION _ MINUTES_01-02-2012-Clarification Sessionv1
0184	Feb 2013	Email	C1_0184_2013FEB_INDUSTRY INTERACTION _ MINUTES & EMAIL_IND & INV FEEDBACK
0185	Feb 2013	PPT	C1_0185_2013FEB_STEERING COMMITTEE INTERACTION _ PRESENTATION
0186	Feb 2013	Doc	C1_0186_2013FEB_STEERING COMMITTEE INTERACTION _ MINUTES
0187	Feb 2013	Doc	C1_0187_2013FEB_STEERING COMMITTEE INTERACTION _ INFORMAL DISCUSSION
0188	Feb 2013	Doc	C1_0188_2013FEB_INDUSTRY INTERACTION _INDUSTRY RESPONSE_QUESTIONS
0189	Feb 2013	Doc	C1_0189_2013FEB_WORKING GROUP INTERACTION _INFORMAL DISCUSSION_QUESTIONS
0190	Feb 2013	Doc	C1_0190_2013FEB_WORKING GROUP INTERACTION _INFORMAL DISCUSSION_RESPONSE TO DOC
0191	Feb 2013	Doc	C1_0191_2013FEB_WORKING GROUP INTERACTION _INFORMAL DISCUSSION_INDUSTRY RESPONSE LETTERS
0192	Feb 2013	Doc	C1_0192_2013FEB_WORKING GROUP INTERACTION _INFORMAL DISCUSSION_ RESPONSE LETTERS
0193	Feb 2013	Email	C1_0193_2013FEB_WORKING GROUP INTERACTION _EMAIL_CORRESPONDENCE
0194	Feb 2013	Email	C1_0194_2013FEB_STAKEHOLDER INTERACTION _EMAIL_CORRESPONDENCE
0195	Feb 2013	Email	C1_0195_2013FEB_WORKING GROUP INTERACTION _EMAIL_STEERCO NOTES AND ACTIONS
0196	Feb 2013	Email	C1_0196_2013FEB_WORKING GROUP INTERACTION _EMAIL_STEERCO NOTES AND ACTION_FINAL
0197	Feb 2013	Email	C1_0197_2013FEB_WORKING GROUP INTERACTION _EMAIL_SUGGESTED FORMAT
0198	Feb 2013	PPT	C1_0198_2013FEB_INDUSTRY INTERACTION _PRESENTATION
0199	Feb 2013	Doc	C1_0199_2013FEB_INDUSTRY INTERACTION _MINUTES_20 FEB
0200	Feb 2013	Email	C1_0200_2013FEB_TOP MANAGEMENT INTERACTION _EMAIL_20 FEB
0201	Feb 2013	Email	C1_0201_2013FEB_TOP MANAGEMENT INTERACTION _EMAIL_20 FEB
0202	Feb 2013	Email	C1_0202_2013FEB_STAKEHOLDER INTERACTION _EMAIL
0203	Feb 2013	Email	C1_0203_2013FEB_INDUSTRY INTERACTION _EMAIL
0204	Feb 2013	Email	C1_0204_2013FEB_STEERING COMMITTEE INTERACTION _EMAIL
0205	Feb 2013	Email	C1_0205_2013FEB_STAKEHOLDER INTERACTION _EMAIL
0206	Feb 2013	Email	C1_0206_2013FEB_STAKEHOLDER INTERACTION _EMAIL
0207	Feb 2013	Email	C1_0207_2013FEB_STAKEHOLDER INTERACTION _EMAIL_1
0208	Feb 2013	Email	C1_0208_2013FEB_INDUSTRY INTERACTION _EMAIL
0209	Feb 2013	Email	C1_0209_2013FEB_WORKING GROUP INTERACTION _EMAIL
0210	Feb 2013	Email	C1_0210_2013FEB_WORKING GROUP INTERACTION _EMAIL

0211	Feb 2013	Email	C1_0211_2013FEB_WORKING GROUP INTERACTION _EMAIL
0212	Feb 2013	Email	C1_0212_2013FEB_WORKING GROUP INTERACTION _EMAIL
0213	Feb 2013	Email	C1_0213_2013FEB_WORKING GROUP INTERACTION _EMAIL_ APPRECIATION
0214	Feb 2013	Doc	C1_0214_2013FEB_INDUSTRY INTERACTION _INDUSTRY RESPONSE
0215	Feb 2013	Doc	C1_0215_2013FEB_INDUSTRY INTERACTION _INDUSTRY RESPONSE
0216	Feb 2013	Doc	C1_0216_2013FEB_STAKEHOLDER INTERACTION _STAKEHOLDER RESPONSE_
0217	Feb 2013	Doc	C1_0217_2013FEB_STAKEHOLDER INTERACTION _STAKEHOLDER RESPONSE
0218	Feb 2013	Doc	C1_0218_2013FEB_STAKEHOLDER INTERACTION _STAKEHOLDER RESPONSE
0219	Feb 2013	Doc	C1_0219_2013FEB_STAKEHOLDER INTERACTION _STAKEHOLDER RESPONSE_ 1
0220	Feb 2013	Doc	C1_0220_2013FEB_STAKEHOLDER INTERACTION _STAKEHOLDER RESPONSE
0221	Feb 2013	Doc	C1_0221_2013FEB_STAKEHOLDER INTERACTION _STAKEHOLDER RESPONSE
0222	Feb 2013	Doc	C1_0222_2013FEB_STAKEHOLDER INTERACTION _STAKEHOLDER RESPONSE
0223	Feb 2013	Doc	C1_0223_2013FEB_INDUSTRY INTERACTION _INDUSTRY RESPONSE
0224	Feb 2013	Doc	C1_0224_2013FEB_STAKEHOLDER INTERACTION _STAKEHOLDER RESPONSE
0225	Feb 2013	Doc	C1_0225_2013FEB_INDUSTRY INTERACTION _INDUSTRY RESPONSE
0226	Feb 2013	Doc	C1_0226_2013FEB_INDUSTRY INTERACTION _INDUSTRY RESPONSE
0227	Feb 2013	Doc	C1_0227_2013FEB_INDUSTRY INTERACTION _INDUSTRY RESPONSE
0228	Feb 2013	Doc	C1_0228_2013FEB_STAKEHOLDER INTERACTION _STAKEHOLDER RESPONSE
0229	Feb 2013	Doc	C1_0229_2013FEB_INDUSTRY INTERACTION _INDUSTRY RESPONSE
0230	Feb 2013	Doc	C1_0230_2013FEB_STAKEHOLDER INTERACTION _STAKEHOLDER RESPONSE
0231	Feb 2013	Doc	C1_0231_2013FEB_STAKEHOLDER INTERACTION _STAKEHOLDER RESPONSE
0232	Feb 2013	Doc	C1_0232_2013FEB_INDUSTRY INTERACTION _INDUSTRY RESPONSE
0233	Feb 2013	Doc	C1_0233_2013FEB_INDUSTRY INTERACTION _INDUSTRY RESPONSE
0234	Mar 2013	PPT	C1_0234_2013MAR_STEERING COMMITTE INTERACTION _EMAIL_ REQUEST
0235	Mar 2013	Email	C1_0235_2013MAR_STEERING COMMITTE INTERACTION _EMAIL_REQUEST
0236	Mar 2013	Email	C1_0236_2013MAR_WORKING GROUP INTERACTION _EMAIL_ DONE WITH ANALYSIS
0237	Mar 2013	Email	C1_0237_2013MAR_STEERING COMMITTEE INTERACTION _EMAIL
0238	Apr 2013	Doc	C1_0238_2013APR_WORKING GROUP INTERACTION _EMAIL_REPORT
0239	Apr 2013	Email	C1_0239_2013APR_WORKING GROUP INTERACTION _EMAIL_ ANALYSIS OF OPTIONS
0240	Apr 2013	Doc	C1_0240_2013APR_WORKING GROUP INTERACTION _EMAIL_ ANALYSIS OF OPTIONS
0241	Apr 2013	Email	C1_0241_2013APR_TOP MANAGEMENT INTERACTION _EMAIL_ ANALYSIS OF OPTIONS
0242	Apr 2013	Email	C1_0242_2013APR_TOP MANAGEMENT INTERACTION _EMAIL_ ANALYSIS OF OPTIONS
0243	Apr 2013	Email	C1_0243_2013APR_TOP MANAGEMENT INTERACTION _EMAIL_ ANALYSIS OF OPTIONS
0244	Apr 2013	Doc	C1_0244_2013APR_TOP MANAGEMENT INTERACTION _RESEARCHER REFLECTION_ PREP FOR DISCUSSION
0245	Apr 2013	PPT	C1_0245_2013APR_TOP MANAGEMENT INTERACTION _RESEARCHER

			REFLECTION_ PREP FOR DISCUSSION
0246	Apr 2013	Doc	C1_0246_2013APR_TOP MANAGEMENT INTERACTION _RESEARCHER REFLECTION_ PREP FOR DISCUSSION
0247	Apr 2013	Doc	C1_0247_2013APR_WORKING GROUP INTERACTION _RESEARCHER REFLECTION_REPORT
0248	Apr 2013	Doc	C1_0248_2013APR_WORKING GROUP INTERACTION _EMAIL_REPORT
0249	Apr 2013	Doc	C1_0249_2013APR_TOP MANAGEMENT INTERACTION _RESEARCHER REFLECTION_ APPLES FOR APPLES
0250	Apr 2013	Email	C1_0250_2013APR_STEERING COMMITTEE INTERACTION _EMAIL_ APPLES FOR APPLES
0251	Apr 2013	Doc	C1_0251_2013APR_STEERING COMMITTEE INTERACTION _EMAIL_ APPLES FOR APPLES
0252	Apr 2013	Email	C1_0252_2013APR_TOP MANAGEMENT INTERACTION _EMAIL_ REFLECTION
0253	Apr 2013	Email	C1_0253_2013APR_WORKING GROUP INTERACTION _EMAIL_ REFLECTION MORE REFLECTION
0254	Apr 2013	Email	C1_0254_2013APR_WORKING GROUP INTERACTION _EMAIL_ STEERCO PRESENTATION
0255	Apr 2013	PPT	C1_0255_2013APR_WORKING GROUP INTERACTION _EMAIL_ STEERCO PRESENTATION
0256	Apr 2013	Email	C1_0256_2013APR_TOP MANAGEMENT INTERACTION _EMAIL_ STEERCO PRESENTATION
0257	Apr 2013	Email	C1_0257_2013APR_STEERING COMMITTEE INTERACTION _MINUTES_ 23 APRIL STEERCO
0258	Apr 2013	Email	C1_0258_2013APR_WORKING GROUP INTERACTION _EMAIL_ MANDATE
0259	Apr 2013	Email	C1_0259_2013APR_STEERING COMMITTEE INTERACTION _EMAIL
0260	Apr 2013	Email	C1_0260_2013APR_CEO INTERACTION _EMAIL
0261	Apr 2013	Email	C1_0261_2013APR_WORKING GROUP INTERACTION _EMAIL_ MANDATE
0262	Apr 2013	Email	C1_0262_2013APR_WORKING GROUP INTERACTION _EMAIL_REVIEW REPORT
0263	Apr 2013	Email	C1_0263_2013APR_WORKING GROUP INTERACTION _EMAIL_ DRAFT MANDATE
0264	May 2013	Email	C1_0264_2013MAY_STEERING COMMITTEE INTERACTION _EMAIL
0265	May 2013	Email	C1_0265_2013MAY_WORKING GROUP INTERACTION _EMAIL_ MANDATE
0266	May 2013	Email	C1_0266_2013MAY_STEERING COMMITTEE INTERACTION _EMAIL
0267	May 2013	Email	C1_0267_2013MAY_WORKING GROUP INTERACTION _EMAIL_ DRAFT MANDATE
0268	May 2013	Email	C1_0268_2013MAY_WORKING GROUP INTERACTION _EMAIL_ DRAFT MANDATE
0269	May 2013	Email	C1_0269_2013MAY_INDUSTRY INTERACTION _EMAIL_ UPDATE
0270	May 2013	Email	C1_0270_2013MAY_CEO INTERACTION _EMAIL_ MANDATE
0271	May 2013	Doc	C1_0271_2013MAY_CEO INTERACTION _EMAIL_ MANDATE
0272	May 2013	Email	C1_0272_2013MAY_WORKING GROUP INTERACTION _EMAIL_ DRAFT MANDATE
0273	May 2013	Email	C1_0273_2013MAY_STEERING COMMITTEE INTERACTION _EMAIL
0274	May 2013	Doc	C1_0274_2013MAY_INDUSTRY INTERACTION _MINUTES
0275	May 2013	PPT	C1_0275_2013MAY_CEO INTERACTION _INFORMAL DISCUSSION_ POLICY OPTIONS
0276	May 2013	Email	C1_0276_2013MAY_TOP MANAGEMENT INTERACTION _INFORMAL DISCUSSION
0277	June 2013	Email	C1_0277_2013JUN_WORKING GROUP INTERACTION _EMAIL_ PRES FOR STEERCO
0278	June 2013	PPT	C1_0278_2013JUN_WORKING GROUP INTERACTION _PRESENTATION_ PRES FOR STEERCO
0279	June 2013	Doc	C1_0279_2013JUN_WORKING GROUP INTERACTION _INFORMAL DISCUSSION_ TELE
0280	June 2013	Doc	C1_0280_2013JUN_TOP MANAGEMENT INTERACTION _INFORMAL DISCUSSION

0281	June 2013	Doc	C1_0281_2013JUN_STEERING COMMITTEE INTERACTION _MINUTES
0282	June 2013	Doc	C1_0282_2013JUN_WORKING GROUP INTERACTION _EMAIL
0283	June 2013	Email	C1_0283_2013JUN_STAKEHOLDER INTERACTION _INFORMAL DISCUSSION
0284	June 2013	Doc	C1_0284_2013JUN_ WORKING GROUP INTERACTION _INFORMAL DISCUSSION
0285	June 2013	Doc	C1_0285_2013JUN_ WORKING GROUP INTERACTION _INFORMAL DISCUSSION_ TELE
0286	June 2013	Doc	C1_0286_2013JUN_ CEO INTERACTION _INFORMAL DISCUSSION_ MANDATE
0287	June 2013	Email	C1_0287_2013JUN_ CEO INTERACTION _EMAIL_ MANDATE
0288	July 2013	Email	C1_0288_2013JUL_ WORKING GROUP INTERACTION _EMAIL_ COMMUNIQUE
0289	July 2013	Email	C1_0289_2013JUL_ STEERING COMMITTEE INTERACTION _EMAIL_ RESPONSE
0290	July 2013	Doc	C1_0290_2013JUL_ STEERING COMMITTEE INTERACTION _EMAIL_FINAL MANDATE
0291	July 2013	Doc	C1_0291_2013JUL_ STEERING COMMITTEE INTERACTION _EMAIL_FINAL MANDATE
0292	July 2013	Doc	C1_0292_2013JUL_ STAKEHOLDER INTERACTION _EMAIL_POSITION
0293	July 2013	Doc	C1_0293_2013JUL_ WORKING GROUP INTERACTION _EMAIL_ EXCLUSION
0294	July 2013	Doc	C1_0294_2013JUL_ CEO INTERACTION _INFORMAL INTERACTION_ GAME OVER
0295	July 2013	Doc	C1_0295_2013JUL_TOP MANAGEMENT INTERACTION _INFORMAL INTERACTION_ PROJECT STRUCTURE
0296	July 2013	PPT	C1_0296_2013JUL_INDUSTRY INTERACTION _PRESENTATION_ PROJECT STRUCTURE
70 Memos captured			This is pulling the relevant memos into the database to be used as data as well.
0297	Jan 2014	Memo	C1_0297_2014JAN_MEMO71_On reflection of initiation of Case 1
0298	Jan 2014	Memo	C1_0298_2014JAN_MEMO1_ Anxious pre-thoughts before coding
0299	Jan 2014	Memo	C1_0299_2014JAN Mock memo – initial codes
0300	Jan 2014	Memo	C1_0300_2014JAN Mock memo – initial codes
0301	Jan 2014	Memo	C1_0301_2014JAN_MEMO1_ Anxious pre-thoughts before coding
0302	Jan 2014	Memo	C1_0302_2014JAN_MEMO2_ Provisional choice of codes
0303	Jan 2014	Memo	C1_0303_2014JAN_MEMO3_Personal relationship to study
0304	Jan 2014	Memo	C1_0304_2014JAN_MEMO4_ Correlation and Bonding
0305	Jan 2014	Memo	C1_0305_2014JAN_MEMO5_ REFLECTION ON PROCESS
0306	Jan 2014	Memo	C1_0306_2014JAN_MEMO6_ First Industry Exposure to Philosophies
0307	Jan 2014	Memo	C1_0307_2014JAN_MEMO7_ First Contact Reflection on Responses
0308	Jan 2014	Memo	C1_0308_2014JAN_MEMO8_ Formation of Aggregate
0309	Jan 2014	Memo	C1_0309_2014JAN_MEMO9_ Feeling Lost During Coding Process
0310	Jan 2014	Memo	C1_0310_2014JAN_MEMO10_ Reflection on industry responses - July 2012
0311	Jan 2014	Memo	C1_0311_2014JAN_MEMO11_ Reflection on Coding and Memoing Process (Corbin)
0312	Jan 2014	Memo	C1_0312_2014JAN_MEMO12_ Countering Seeds of Doubt - WG Meeting 13 July 2012
0313	Jan 2014	Memo	C1_0313_2014JAN_MEMO13_ Creating Safe Space for Engagement
0314	Jan 2014	Memo	C1_0314_2014JAN_MEMO14_ Thoughts on linking codes and memos
0315	Jan 2014	Memo	C1_0315_2014JAN_MEMO15_ How to move forward - first cycle coding or memoing?
0316	Jan 2014	Memo	C1_0316_2014JAN_MEMO16_ Importance of complex problem solving skills
0317	Jan 2014	Memo	C1_0317_2014JAN_MEMO17_ Reflection from conversation with Taki
0318	Jan 2014	Memo	C1_0318_2014JAN_MEMO18_ Negative correlation, forced compliance & social skills
0319	Jan 2014	Memo	C1_0319_2014JAN_MEMO19_ Influence seeking behaviour & correlation

0320	Jan 2014	Memo	C1_0320_2014JAN_MEMO20_ Positive correlation & return to meta-aggregate
0321	Jan 2014	Memo	C1_0321_2014JAN_MEMO21_ Positive correlation & return to meta-aggregate
0322	Jan 2014	Memo	C1_0322_2014JAN_MEMO22_ Brain Dump
0323	Jan 2014	Memo	C1_0323_2014JAN_MEMO23_ Properties and Dimensions of Leader Complex Skills
0324	Jan 2014	Memo	C1_0324_2014JAN_MEMO24_ Merging the knowledge gap & reducing dissonance
0325	Jan 2014	Memo	C1_0325_2014JAN_MEMO25_ Complex cognitive skills
0326	Jan 2014	Memo	C1_0326_2014JAN_MEMO26_ Supporting Collective Action & Encouraging Rich Interactions
0327	Jan 2014	Memo	C1_0327_2014JAN_MEMO27_ Principal support & Valence from Outsider
0328	Jan 2014	Memo	C1_0328_2014JAN_MEMO28_ "2 Steps Back - Reflection on the Coding and Memoing Process
0329	Jan 2014	Memo	C1_0329_2014JAN_MEMO29_ Initiating change - "ants in my pants" & "birds of feather"
0330	Jan 2014	Memo	C1_0330_2014JAN_MEMO30_ Initiating change - "ants in my pants"
0331	Jan 2014	Memo	C1_0331_2014JAN_MEMO31_ Initiating communication e.g. & disconfirmation bias
0332	Jan 2014	Memo	C1_0332_2014JAN_MEMO32_ Showing our hand too soon
0333	Jan 2014	Memo	C1_0333_2014JAN_MEMO33_ Setting up the argument
0334	Jan 2014	Memo	C1_0334_2014JAN_MEMO34_ Oh what a tangled web we weave
0335	Jan 2014	Memo	C1_0335_2014JAN_MEMO35_ Ruffling feathers, playing the man, other fish to fry & somethings smells fishy
0336	Jan 2014	Memo	C1_0336_2014JAN_MEMO36_ Confirmation bias - top management team interaction - we are still on track
0337	Jan 2014	Memo	C1_0337_2014JAN_MEMO37_ Putting myself in their shoes
0338	Jan 2014	Memo	C1_0338_2014JAN_MEMO38_ Not missing the mark & in the land of the blind
0339	Jan 2014	Memo	C1_0339_2014JAN_MEMO39_ Hello Peter Confirmation bias
0340	Jan 2014	Memo	C1_0340_2014JAN_MEMO40_ Example of influence seeking behaviour
0341	Jan 2014	Memo	C1_0341_2014JAN_MEMO41_ Example of complex problem solving skills
0342	Jan 2014	Memo	C1_0342_2014JAN_MEM42_ Leaving no stone unturned
0343	Jan 2014	Memo	C1_0343_2014JAN_MEMO43_ Short sightedness ito need for engagement
0344	Jan 2014	Memo	C1_0344_2014JAN_MEMO44_ Misinterpretation & misunderstanding of new information
0345	Jan 2014	Memo	C1_0345_2014JAN_MEMO45_ Further reflection on industry responses
0346	Jan 2014	Memo	C1_0346_2014JAN_MEMO46_ Playing rain interrupted tennis - insufficient rich interactions
0347	Jan 2014	Memo	C1_0347_2014JAN_MEMO47_ Memo12: Countering Seeds of Doubt 2 - WG Meeting 13 July 2012
0348	Jan 2014	Memo	C1_0348_2014JAN_MEMO48_ MEMO13 Creating Safe Space for Engagement2
0349	Jan 2014	Memo	C1_0349_2014JAN_MEMO49_ MEMO16 Importance of complex problem solving skills
0350	Jan 2014	Memo	C1_0350_2014JAN_MEMO49_ MEMO20 Positive correlation & return to meta-aggregate2
0351	Jan 2014	Memo	C1_0351_2014JAN_MEMO51_ MEMO20 Solidly on board or defensive routines (my way or highway)
0352	Jan 2014	Memo	C1_0352_2014JAN_MEMO52_ Forced compliance, misinterpretation & lack of support
0353	Jan 2014	Memo	C1_0353_2014JAN_MEMO53_ We've listened to the folks & NEED FOR ENGAGEMENT
0354	Jan 2014	Memo	C1_0354_2014JAN_MEMO54_Defensive routines & tolerance to engage
0355	Jan 2014	Memo	C1_0355_2014JAN_MEMO55_Moment of truth & poised for correlation
0356	Jan 2014	Memo	C1_0356_2014JAN_MEMO56_ Influence seeking, sensing poised for correlation

0357	Jan 2014	Memo	C1_0357_2014JAN_MEMO57_Putting lipstick on a pig_or round & round the mulberry bush
0358	Jan 2014	Memo	C1_0358_2014JAN_MEMO58_Creating the conduit for engagement vs opening up a can of worms
0359	Jan 2014	Memo	C1_0359_2014JAN_MEMO59_2nd Bank Session - the height of defensive routines
0360	Jan 2014	Memo	C1_0360_2014JAN_MEMO60_Feb Steerco
0361	Jan 2014	Memo	C1_0361_2014JAN_MEMO61_Lets consider the arguments with an open mind vs stick to our guns
0362	Jan 2014	Memo	C1_0362_2014JAN_MEMO62_Dissonance - relegating importance of issues raised
0363	Jan 2014	Memo	C1_0363_2014JAN_MEMO63_ All hell breaks loose - to the edge of chaos
0364	Jan 2014	Memo	C1_0364_2014JAN_MEMO64_Our MENTAL MODELS and DISSONANCE REDUCTION
0365	Jan 2014	Memo	C1_0365_2014JAN_MEMO65_ Industry final responses - resistance or rational concerns
0366	Jan 2014	Memo	C1_0366_2014JAN_MEMO66_Start of disaggregation
0367	Jan 2014	Memo	C1_0367_2014JAN_MEMO67_ In defence of credit push
0368	Jan 2014	Memo	C1_0368_2014JAN_MEMO68_Entanglement
0369	Jan 2014	Memo	C1_0369_2014JAN_MEMO69_Disaggregation & Dissipation
0370	Jan 2014	Memo	C1_0370_2014JAN_MEMO70_Write up Chapters 6 and 7
0371	Jan 2014	Memo	C1_0371_2014JAN_MEMO71_On reflection of initiation of Case 1
0372	Aug2013	Email	C1_0372_2014AUG_ STAKEHOLDER INTERACTION _EMAIL_ VAVI
0373	Mar 2014	Memo	C1_0373_2014MAR_MEMO73_Informal conv_ badmouthing
0374	Sep 2013	Email	C1_0374_2013SEP_ STAKEHOLDER INTERACTION _STAKEHOLDER RESPONSE_ 1

Appendix B - Provisional Coding List

Table A11.2   *List of codes, code descriptions and source of code*

Code	Description	Source
Attractor	An attractor is a limited area in a system's state space that it never departs.	Anderson (1999)
	Attractors are "phenomena that arise when small stimuli and probes (whether from leaders or others) resonate with people. As attractors gain momentum, they provide structure and coherence" to a system (Snowden & Boone, 2007, p. 6). An attractor is a dynamic, a trajectory of behaviors, a gravity pit that draws people into it and influences their behaviors. The phenomena that define a fad are an attractor, for example.	Uhl-Bien and Marion (2009)
Strange Attractor	Chaotic systems revolve around "strange attractors," fractal objects that constrain the system to a small area of its state space, which it explores in a never-ending series that does not repeat in a finite amount of time.	Anderson (1999)
	A pattern emerges within the basin of attraction; it is referred to as a "strange attractor," which is the system's bounded preferences of microstates (Lee, 1997).	Schneider and Somers (2006)
Butterfly effect	The behaviour of complex processes can be quite sensitive to small differences in initial conditions, so that two entities with very similar initial states can follow radically divergent paths over time. Consequently, historical accidents may "tip" outcomes strongly in a particular direction (Arthur 1989)	Anderson (1999)
	Dissipative structures may react disproportionately to an environmental change. A small exogenous event may trigger a change in the fundamental character of a system. (It may also trigger no change, a change that is proportionate to the event; or a change that is less than proportionate.) The phenomenon of large, dis proportionate change is referred to as the "butterfly effect", i.e., the idea that a butterfly fluttering in Rio de Janiero can change the weather in Chicago (Kauffman, 1993). It was first noted by Lorenz in his study of weather systems and reflects the non-linearity of such systems (Wheatley, 1994) due to the great level of inter-relatedness of system parts (Anderson, 1999).	Schneider and Somers (2006)
Self-organising	Complex systems tend to exhibit "self-organizing" behavior: starting in a random state, they usually evolve toward order instead of disorder (Kauffman 1993).	Anderson (1999)
Agent	Individuals, groups, or coalitions of groups	Anderson (1999)
	N is the system or organization's number of sub-units	Schneider and Somers (2006)
Schemata/ Mental models	A cognitive structure that determines what action the agent takes at time t, given its perception of the environment (at time t, or at time t - k if theoretical considerations suggest applying a lag structure).	Anderson (1999)
	Different agents may or may not have different schemata	Schneider and Somers (2006)

	(depending on one' s theory), and schemata may or may not evolve over time. Often, agents' schemata are modeled as a set of rules, but schemata may be characterized in very flexible ways. For ex-ample, an agent may select one rule from a suite of possible rules, or it may invoke fuzzy rules, or its cognitive structure may be represented by a neural network (described in more detail later in this article) P is the common schemata the sub-units share, a measure of internal homogeneity In system dynamics the term mental model includes our beliefs about the networks of causes and effects that describe how a system operates, along with the boundary of the model (which variables are included and excluded) and the time horizon we consider relevant – our framing or articulation of a problem. (Sternman, 2000)	
Self-Organizing Networks	Agents are partially connected to one another, so that the behavior of a particular agent depends on the behavior (or state) of some subset of all the agents in the system. In system dynamics models, variables are connected to one another by feedback loops; in CAS models, agents are connected to one another by feedback loops. Each agent observes and acts on local information only, derived from those other agents to which it is connected	Anderson (1999)
Coevolution to the Edge of Chaos.	Agents co-evolve with one another. Each agent adapts to its environment by striving to increase a payoff or fitness function over time (Holland and Miller 1991).	Anderson (1999)
Poised systems	Poised systems have the flexibility to evolve rapidly through the accumulation of useful variations (Kauffman, 1993), and the concept of self-organized criticality suggests that many systems can evolve to this poised state (Mathews et al., 1999).	Schneider and Somers (2006)
Recombination and System Evolution	Complex adaptive systems evolve over time through the entry, exit, and transformation of agents. New agents may be formed by recombining elements of previously successful agents.	Anderson (1999)
Fitness	Fitness is a complex combination of returns to exploitation, returns to exploration, and returns to reputation, market position, and capabilities built from past adaptations (A. Lewin et al. 1999).	Anderson (1999)
Interaction/engageme nt	K is the level of inter-relatedness or interaction of the sub-units, measured by the inputs to each N, which introduces non-linearity into the system (Morel & Ramanujam, 1999).	Schneider and Somers (2006)
	C is an inter-system variable; it is the level of inter-relatedness or interaction of N across systems and is another source of nonlinearity.	Lichtenstein et al. (2006) Uhl-Bien and Marion (2009)
	Agent interactions can generate tension through which novel information can emerge; when those new ideas lead to positive change, adaptive leadership has occurred. In this case, the tension that arises in agent interactions can function as a core driver for change in adaptive leadership. Dynamic interaction is essential for, and productive of, the	

	nonlinearity, coupling, and attractor dynamics described above	
Interdependence	The productive well-being of one agent or aggregate is dependent on the productive well-being of others.	Uhl-Bien, Marion, and McKelvey (2007)
	Interdependence is associated with the concept of shared need (Marion & Uhl-Bien, 2001), which refers to the extent to which individuals interact to accomplish a task, goal, objective, vision, etc. Without interdependence, agents will not be likely to engage in the dynamic interaction and bonding behavior necessary in complex adaptive systems. Shared need is different from traditional leadership approaches that focus on a "shared goal" or "vision" in that it does not require agents to hold the same goal or vision.	Uhl-Bien and Marion (2009)
Adaptation	Is the passage of an organization through an endless series of organizational microstates that emerge from local interactions among agents trying to improve their local payoffs.	Anderson (1999)
Emergence	Emergence can be defined as a process by which ``patterns or global-level structures arise from interactive local-level processes. The combination of elements with one another brings with it something that was not there before'' (Mead, 1932, cited in Mihata, 1997, p. 31). This ``something that was not there before'' has properties that are not at all reducible to its parts ± this is precisely the issue of emergence	Lichtenstein (2000) Marion and Uhl-Bien (2001)
	Refer to the complexity dynamics of interaction, correlation and random effects within and among aggregates as ''emergence.''	
	Emergence of new organizing structures Following a period of stress and tension, and catalyzed by a critical threshold event, a new regime of order can emerge in a dynamic, complex system. This new level or regime of order brings with it something that was not there before ± a new framework for organizing work (Gersick, 1988), a new dominant logic (Bettis and Prahalad, 1995), a new configuration (Katz, 1993), or a new direction in corporate strategy and culture (Lichtenstein, 1997; MacIntosh and MacLean, 1999).	Uhl-Bien et al. (2007)
	The capacities of a complex system are greater than the sum of its constituent parts A system can have emergent qualities that are not analytically tractable from the attributes of internal components Emergence is a function of synergism, whereby system wide characteristics do not result from superposition (i.e. additive effects of system components) but instead from interactions from components.	Uhl-Bien and Marion (2009)
	Emergence refers to a nonlinear suddenness that characterizes change in complex systems (Marion, 1999; see also Plowman et al. in this edition). It derives from the collapse (or, more technically, dissipation) of built up tensions (Prigogine, 1997), sudden mergers (or divergences) of formerly separate CAS (Kauffman, 1993), or a cascade of changes through network	

	connections (Bak, 1996). Creativity and learning occur when emergence forms a previously unknown solution to a problem or creates a new, unanticipated outcome (i.e., adaptive change).	
	Emergence, according to Lichtenstein & Plowman (2009-this issue) is often described as "qualitative novelty" in a system, or "the coming into being of a semi-autonomous 'level' of activity…that is generated out of the system's components (von Bertalanffy, 1956) yet 'transcends' them by producing outcomes that are unexpected or striking in some way".	
Aggregation	``Aggregation,'' which concerns ``the emergence of complex large-scale behaviors from the aggregate interactions of less complex agents.	Lichtenstein (2000)
Aggregates	Combinations or linkages that represent a ''system''	Marion and Uhl-Bien (2001)
	Refer to ensembles as ''aggregates''	
	A term borrowed from John Holland (Holland, 1995) who coined it to refer to structures that emerged in his neural network computer simulations.	Schneider and Somers (2006)
	Applied to social systems, aggregates are small groups of directly interacting actors who have a sense of common identity. An aggregate might be a family unit, a social clique, or a work group.	Uhl-Bien et al. (2007)
	Social movements are sets of beliefs and actions for changing elements of a society. They are associated with networks of groups, based on a collective identity, that participate in collective action to bring about change (Rucht & Neidhardt, 2002). Social movements come to affect multiple system variables and their interactions across local, global, and contextual levels.	
	Clusters of interacting agents engaged in some measure of cooperative behavior)	
Increased dynamic ordering (Stage 1)	An important characteristic of this process is that the organizational configurations or patterns of behavior that come into being allow the system to achieve its goals, while at the same time, the achievement of goals allows the configuration itself to be reproduced (Drazin and Sandelands, 1992). In the same way, a dominant logic gets produced out of the interactions of values, beliefs, structures and strategies, while at the same time that logic determines the configuration of values, structures and strategies of a firm (Bettis and Prahalad, 1995). Some suggest that this configuration is a chaos attractor (Thelan and Smith, 1994; Guastello, 1995) or a complex attractor (Marion, 1999), that can be empirically identified through the mathematics of chaos theory (e.g. Brown, 1995; Cheng and Van de Ven, 1996).	Anderson (1999)

	In effect, an organizing structure ± the configuration, the attractor ± provides the organization with a certain capacity for learning and accomplishing goals.	
Tension/ Stress	A specific quality of NDS occurs when the limits of a firm's organizing capacity are reached. In practice, these capacity limits refer to the level of resources that are necessary to continuously self-generate the organizing configuration or dominant logic. Complexity researchers argue that capacity limits are mostly stable, such that in the face of perturbations, the configuration or attractor will resist change and return to the normal regime of functioning (Goldstein, 1986; Huff et al., 1992; Hannan and Freeman, 1984). However, as soon as the system's limits to capacity are superseded ± i.e. resource flows begin to go beyond configuration limits or they drop below capacity limits ± the system will begin a process of transformation. Initially, tension and stress will increase, in the form of new approaches or ideas (enactments and experiments), as the system searches for a better way to organize (MacIntosh and MacLean, 1999). If the organizing capacity does overload, a small enactment or perturbation in the system will become amplified, destabilizing the current organizing. – Butterfly effect?	Anderson (1999)
	When agents interact they may experience tension in the form of pressures on and challenges to their personal knowledge base (Carley and Hill, 2001). Such challenges to agent schema can, under the right enabling conditions, foster realignment of agents' cognitive maps to resonate better with the new information. That is, agents realign their schema in order to accommodate and thus mitigate disagreement (Kauffman, 1993; Marion and Uhl-Bien, 2001).	Lichtenstein et al. (2006)
	Adaptive tension is a pressure on a system to elaborate and adjust. Without such pressure, there is no initiative to change. Tension can derive from various sources, including conflicting constraints, administrative leader pressure, environment (e.g., competitors), or adaptive challenges. As described above, tension from conflicting constraints often comes from heterogeneity. Moreover, adaptive challenges (Heifetz & Laurie, 2001) create tension in that they pressure a system to create something new, to adapt in an unexpected way, or to change relationships or structures in order to meet the challenge.	Uhl-Bien and Marion (2009)
Threshold events	According to the assumption of non-proportionality, once the system moves beyond its region of stability ± when capacity limits are broken ± the system shifts from linear causality to non-linear, non-proportionality. As a result the system amplifies feedback effects, instead of suppressing them. ``Below a certain threshold level, change is unlikely and perturbations are dampened. Above the threshold value, change is imminent and perturbations are magnified'' (Dooley, 1997, p. 87). In this state a single idea or perturbation often provides the seed for a newly emerging organizing structure	Anderson (1999)

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	(Prigogine and Stengers, 1984). These critical threshold events have been described by organizational change theorists (e.g. Golembiewski et al., 1975), and can be modeled by catastrophe theory (Bigelow, 1982; Guastello, 1995). And they are very real for managers who are at the brink of a transition.	
Distributed intelligence	The networked intellectual capabilities of human agents	Marion and Uhl-Bien (2001)
Micro-dynamics (correlation, interaction, randomness)	Microdynamics represent the bottom-up behaviors that occur when individuals interact, leading to both coordinated behavior and random behavior. The linkages created by these interactions may evolve into aggregates (i.e., combinations or linkages that represent a ''system''), meta-aggregates (i.e., combinations of systems), and meta-meta-aggregates (combinations of meta-aggregates).	Marion and Uhl-Bien (2001)
Meta aggregates	Combinations of systems Clusters of aggregates that are somewhat less interdependent and directly related than are the units in an aggregate, but which are linked by direct dependence on common resources or events. An organization's clients, its suppliers, and its external board of directors are all elements of a meta-aggregate. Meta-aggregates, like aggregates, are limited in size by the necessity to work through conflicting constraints.	Marion and Uhl-Bien (2001)
Meta meta aggregates	Combinations of meta aggregates	Marion and Uhl-Bien (2001)
Macrodynamics	Macrodynamics represent the emergence of the larger systems from the interactions at the microlevel. Macro behaviors are driven by the microdynamics and by what we will call complex natural teleology (physics, autocatalysis, selection, and need), and are characterized by ''bottom-up'' coordination and by nonlinear behavior	Marion and Uhl-Bien (2001)
Correlation Resonance	Correlation is the emergence of common understanding in interacting systems; it leads to a degree of dynamic stability. The sharing of resonances (i.e., individualistic behaviors) among interacting particles. We define it for social theory as the emergence of common understanding in interacting social systems The product of accommodations that evolve when different people or groups struggle to work out conflicting constraints that inhibit their need preferences. Marketing and manufacturing departments in production organizations, for example, have conflicting needs such as differing scheduling requirements. Interaction provides mechanisms by which such constraints can be addressed	Marion and Uhl-Bien (2001)
First order correlation & Second order correlation	Correlation among individuals and aggregates leads to a measure of dependable coordinated behavior — perhaps more so in some types of organizations than in others. Still, correlation characterizes all organizations; otherwise, they would not be ''organized.'' With correlation comes a level of predictability on which leadership can operate. Correlation also occurs on another level, which we will call second-order correlation. First-order correlations	Uhl-Bien, Marion, and McKelvey (2007)

	accommodates not only the needs of individuals, it also accommodates the needs of the network (aggregate) as a whole; that is, the correlational process seeks to maximize the first order fitness needs of each individual and the second-order fitness-need of the aggregate. Correlation, in turn, provides the structure against which conflicting constraints are arbitrated and organization is built. Resonance is defined as acting in concert; it refers more specifically to situations in which the behaviors of two or more agents are interdependent	
Autocatalysis	Autocatalysis involves catalysts, which are events or things that speed up a process that could conceivably occur without the catalyst, but that would take forever to do so. A catalyst can also make things happen that would not happen otherwise.	Marion and Uhl-Bien (2001)
Tags	A social tag as any structure or information that catalyzes (enables or speeds up) certain social behaviors. A tag can include a new technology, an idea, a symbol (such as a flag), a symbolic act (the beating of Rodney King in 1992 was a symbol of police brutality and prejudice in Los Angeles), a group myth, or a belief. A tag can also be a leader, and this application of the concept is particularly important in this article. Leader tags emerge out of, and owe their existence to, interactive dynamics. That is, they rarely (and we suspect, never) create an interactive dynamic themselves; rather they are produced by the dynamic. Martin Luther King did not create the civil rights movement; rather he catalyzed its development. Churchill did not win the Battle over Great Britain, but he symbolized British courage. (Autocatalysis requires no outside effort, no work by a central coordinating bureaucracy, no labor by the forces of natural selection; rather, it creates order for free. It appears unbidden, whether we want it or not. Birds flock naturally, without coordination).	
Need	Need, the second element of complex natural teleology, provides motivation for emergence. In the social sciences, it refers to the human drive to satisfy desires or needs. Deliberative need satisfaction is local, a function of the individual. People desire prestige, power, legitimacy, and resources, for example; or they seek to enhance their effectiveness as workers. When these needs are at odds with one another, they become conflicting constraints that inhibit individual need satisfaction. Order emerges from interaction around these constraints resulting in compromises among individual need preferences (the correlation phenomenon).	Marion and Uhl-Bien (2001)
Physics	Physics refers to the external and internal demands and restrictions that limit or enable system behaviors. Physical restrictions may include limitations imposed by technology, by the availability of resources, by size and coordination, and by organizational or social inertia. Conflicting	Marion and Uhl-Bien (2001)

	constraints imposed by differing first- and second-order needs can be subsumed under physics. The demands can be restricted by an organization's mission. Physical demands can even be socially constructed, reflecting social beliefs rather than technological reality (DiMaggio & Powell, 1983; Scott, 1987). Solutions that emerge out of need-driven autocatalytic activity are restrained by physical conditions and (more importantly) are shaped by the need to resolve interacting physical constraints. Conflicting need constraints, for example, impose barriers and challenges for the autocatalytic process. Complex leaders seek to control physical restraints by, among other things identifying and acquiring enabling technologies and other resources or by ''dropping'' ideas into the system.	
Natural Selection	Natural selection helps drive the selection of forms from among sets of possible forms1 (as restricted by physics). Selection proponents further argue that mutations provide the variation from which selection chooses	Marion and Uhl-Bien (2001)
Foster network construction	In complex organizations, effective leaders learn to manage and develop networks. They foster and cultivate interdependencies within and without the organization (Marion & Bacon, 1999).	Marion and Uhl-Bien (2001)
Catalyze bottom-up network construction	Complex leaders will not only build networks (Gnyawali & Madhavan, 2001), they will help catalyze network-building as well. A catalyst is a person who indirectly fosters network construction (Levin, 1993). The leader can perform this role through o – Delegating - delegation, by providing encouragement and resources to subordinates (such as enabling workers to attend conferences) or by simply not interfering in network construction (Marion & Bacon, 1999). o Empowering - Leaders could extend decision-making powers to their staff, and trust (plus expect) them to utilize the responsibility well (Manz & Sims, 1984). o They could organize their work environment to enable and encourage interaction among workers (cubicles can encourage isolation; complex leaders structure open spaces or organize offices around a central work area). o Complex leaders build rituals and myths that are oriented toward interaction and networking (Schein, 1992). o They avoid solving problems for workers; instead, they require that they work out their problems together (Manz & Sims, 1987). o They move quickly to get personal conflicts resolved but enable, even encourage, task-related conflicts which resolve conflicting constraints (Jehn, 1997). o They encourage communication among the components of their aggregates, meta-aggregates, and meta-meta-aggregates.	Marion and Uhl-Bien (2001)
Become leadership	Leaders also catalyze network development by becoming what	Marion and Uhl-Bien (2001)

''tags''	John Holland (Holland, 1995) has called a ''tag.'' As we said earlier, a tag symbolizes the aggregate and it separates an aggregate from other aggregates. It is the flag around which everyone rallies; it is the philosophy that binds people together. Tags are not necessarily leaders. Flags and ideas do not lead, they symbolize and draw people together. Leaders can be potent in the role of tag, however. The catalyzing school principal might serve as a tag for instructional excellence; the catalyzing dean might serve as tag for a school's research excellence and its teaching reputation. Such tags articulate a system's personality for its inhabitants and for its public. They rally subordinates around the organization's ideals. They build myths that implant the system's ideals into the minds of workers and the public. Leadership tags can embody the organization within their own personalities, much as Howard Hughes embodied the essence of Hughes' Aircraft with his personality. The tag becomes the organization and the organization becomes the tag—they are inseparable and unique, well defined against a background of other systems. Tags promote and articulate an idea and an attitude. But they do not necessarily control the movement as many charismatic writers want to suggest (Howell & Frost, 1989; Kirkpatrick & Locke, 1996). Indeed, in many ways, they are simply along for an inevitable ride. Movements and organizational systems are complex entities, and the wise leaders will not stifle their creativity with strict, top-down controls.	
Drop seeds of emergence	Leaders of complex organizations drop seeds of emergence. McKelvey (1999, p. 77) poses the question, ''How do we actually do leadership in a way that fosters emergent structure in a firm without the leader somehow creating a bunch of passive followers following some vision?'' (p. 77). They do it by - Identifying knowledge centers within an organization, - by encouraging the centers to do creative things, and - by getting them to communicate with one another. - Leaders encourage people to try things, then to evaluate and change their experiments (Allen, 2001). - The complex leader does not closely control, for controls limit the organization's potential; rather, the complex leader creates organized disorder in which dynamic things happen at multiple locales within the system (Regine & Lewin, 2000). - Such a leader seeks to spawn emergent behavior and creative surprises rather than to specify and control organizational activities. - Complex leaders help workers develop ''solutions without problems'' (Cohen & March, 1974; Cohen, March, & Olsen, 1972, 1976) by sending them to conferences or similar idea spawning activities. - And they foster the development of moderately coupled structures in which ideas can emerge freely	Marion and Uhl-Bien (2001)

	and find one another.	
Think systemically	Complex leaders think systemically (Senge, 1990); they are aware of the interactive dynamics going on at the aggregate, meta-aggregate, and meta-meta-aggregate levels. This is not an easy thing for most of us to do—as leaders or in our personal lives. We interpret situations in terms of the things that are happening to us immediately and fail to see the larger picture (this argument is the thrust of Senge's, 1990 observations) (Senge, 1990), consequently, we move from one localized incident to the next stamping out the fires but never seeing the broader pattern of events. We perceive problems as events that happen to us and fail to understand that we are part of the network of events that created the problem. There is pattern to complex systems, but we often cannot see it because we are too focused on our immediate experiences. Learning to see the systemic whole can be revelatory.	Marion and Uhl-Bien (2001)
Non-linear dynamics	Knowledge regarding non-linear dynamics is based on the work of Prigogine (1996) and associates on dissipative structures in non-equilibrium thermodynamics; i.e., systems in states of extreme instability. Dissipative structures, characterized by high states of energy exchange with the environment, exhibit an inherent instability that leads them through multiple transitions, reached through a series of points, rather than a tendency toward equilibrium. At each point, the structure moves to a new and generally higher level of complexity that is qualitatively and quantitatively different from previous states (Baker, 1993; Mathews et al., 1999). Systems such as dissipative structures have an emergent quality that comes from the interaction of their elements, sub-systems or agents (Morel & Ramanujam, 1999), rather than from the system's interaction with its environment.	Schneider and Somers (2006)
Adaptive leadership	Leadership (as opposed to leaders) can be seen as a complex dynamic process that emerges in the interactive "spaces between" people and ideas. That is, leadership is a dynamic that transcends the capabilities of individuals alone; it is the product of interaction, tension, and exchange rules governing changes in perceptions and understanding Adaptive leadership is defined for this paper as an interactive event in which knowledge, action preferences, and behaviors change, thereby provoking an organization to become more adaptive Adaptive leadership then may take advantage of such tension as a driver through which interacting agents (people, ideas, etc.) address complex challenges in ways that produce new patterns of cognition and behavior. Leadership as a generative dynamic that underlies emergent change activities (what we will call, adaptive leadership).	Lichtenstein et al. (2006) Uhl-Bien, Marion, and McKelvey (2007) Uhl-Bien and Marion (2009)

	Adaptive leadership to refer to the leadership that occurs in emergent, informal adaptive dynamics throughout the organization (cf. Heifetz, 1994; Heifetz & Linsky, 2002). Adaptive leadership refers to adaptive, creative, and learning actions that emerge from the interactions of CAS as they strive to adjust to tension (e.g., constraints or perturbations). Adaptive leadership is an informal leadership process that occurs in intentional interactions of interdependent human agents (individuals or collectives) as they work to generate and advance novel solutions in the face of adaptive needs of the organization (cf. Heifetz & Laurie, 2001; Johannessen & Aasen, 2007). It is productive of new ideas, innovation, adaptability, and change (Uhl-Bien et al., 2007).	
Leadership event	Leadership event as a perceived segment of action whose meaning is created by the interactions of actors involved in producing it In this view, leadership is more than a skill, an exchange, or a symbol – leadership emerges through dynamic interactions (Bradbury and Lichtenstein, 2000). "Complexity leadership theory" investigates the role of leadership in expediting those processes in organizations through which interdependent actions among many individuals combine into a collective venture (Drath, 2001; Meyer et al., 2005).	Lichtenstein et al. (2006)
CAS	A CAS is comprised of agents, individuals as well as groups of individuals, who "resonate" through sharing common interests, knowledge and/or goals due to their history of interaction and sharing of worldviews. Agents respond to both external pressures (from environment or from other CAS or agents, e.g., leaders) and internal pressures that are generated as the agents struggle with interdependency and resulting conflicting constraints (physics) (e.g., when the needs of one agent conflict with those of another). These tensions, when spread across a network of interactive and interdependent agents, generate system-wide emergent learnings, capabilities, innovations, and adaptability. Importantly, such elaborations are products of interactions among agents, rather than being "caused" by the specific acts of individuals described as leaders. Open, evolutionary aggregates whose components (or agents) are dynamically interrelated and who are cooperatively bonded by common purpose or outlook. CAS are neural-like networks of interacting, interdependent agents who are bonded in a collective dynamic by common	Lichtenstein et al. (2006) Uhl-Bien, Marion, and McKelvey (2007) Uhl-Bien and Marion (2009)

	need (Cilliers, 1998; Holland,1995; Langston,1986; Marion,1999). They are capable of solving problems creatively and are able to learn and adapt quickly (Carley & Hill, 2001; Carley & Lee, 1998; Goodwin, 1994; Levy, 1992).	
Event	Events are the observable nodes in these cycles; multiple cycles may interact directly or they may be tangential. An event is thus a bracketing of ongoing interactions to create meaning. Following this reasoning, we propose a new definition for an event, namely a perceived segment of action for which meaning relates to interactions among actors	Lichtenstein, Uhl-Bien, Marion, Seers, Orton, and Schreiber (2006)
Administrative leadership	Leadership grounded in traditional, bureaucratic notions of hierarchy, alignment and control (i.e., administrative leadership)	Uhl-Bien, Marion, and McKelvey (2007)
	Administrative leadership to refer to formal acts that serve to coordinate and structure organizational activities (i.e., the bureaucratic function),	Uhl-Bien and Marion (2009)
	Administrators in formal positions of authority likewise influence complex adaptive systems by imposing external coordinating constraints and demands. Such constraints are valuable for (among other things) controlling costs, focusing efforts, allocating resources, and planning	
	Administrative leadership refers to the actions of individuals and groups in formal managerial roles who plan and coordinate activities to accomplish organizationally-prescribed outcomes in an efficient and effective manner.	
	Administrative leadership is the managerial form of leadership that addresses the bureaucratic functions of the organization while not stifling the complex dynamics capable of producing adaptive change (Marion & Uhl-Bien, 2007).	
Enabling leadership	Leadership that structures and enables conditions such that CAS are able to optimally address creative problem solving, adaptability, and learning (referring to what we will call, enabling leadership)	Uhl-Bien, Marion, and McKelvey (2007) Uhl-Bien and Marion (2009)
	Enabling leadership works to catalyze the conditions in which adaptive leadership can thrive and to manage the entanglement (described below) between the bureaucratic (administrative leadership) and emergent (adaptive leadership) functions of the organization. Enabling leadership acts in the interface between the other two: it works to foster conditions conducive to the complex interactive dynamics of adaptive leadership and manages the administrative-to-adaptive and innovation-to-organization interfaces (Marion & Uhl-Bien, 2007).	
Annealing	Capacity to rapidly explore solutions can be illustrated with a problem solving scenario called annealing, which is found in the evolution and simulation complexity literature (Carley, 1997; Carley & Lee, 1998; Kauffman, 1993; Levy, 1992; Lewin, 1999).	Uhl-Bien, Marion, and McKelvey (2007)

	In this scenario, multiple agents struggle with localized effects created by a given environmental perturbations (or tension; this is called localized because an agent cannot usually perceive a problem as a whole nor do they typically have the capacity to deal with an environmental problem in its entirety). As these agents develop localized solutions, work-arounds, or related responses, they affect the behaviors of other interdependently related agents, who subsequently build on the original response to create higher-order responses. This process extends to broader network levels, to the fabric of interdependent agents, and to the CAS that define the system or subsystem. In this process interdependent agents and CAS experiment, change, combine strategies, and find loopholes in other strategies—and, occasionally, unexpected solutions emerge that address the problem at some level. Information flows in the annealing process are not necessarily efficient and agents are not necessarily good information processors. Nor does annealing imply that structural adaptations are embraced as official strategy by upper echelon administrators or that the process finds perfect solutions. The annealing process is imperfect and somewhat messy—as Carley (1997) puts it, "it may not be possible for organizations of complex adaptive agents to locate the optimal form, [but] they can improve their performance by altering their structure" (p. 25). The annealing process (and other processes described in the complexity literature; e.g., McKelvey, in press; Prigogine, 1997) 1 does, however, find solutions that individuals, regardless of their authority or expertise, could not find alone.	
Mechanisms	The dynamic behaviors that occur within a system such as a complex adaptive system. As defined by Hernes (1998), mechanisms are "a set of interacting parts—an assembly of elements producing an effect not inherent in any of them" (p. 74). They are "not so much about 'nuts and bolts' as about 'cogs and wheels'…— the "wheelwork" or agency by which an effect is produced" (Hernes, 1998, p. 74).	Uhl-Bien, Marion, and McKelvey (2007)
	The mechanisms that emerge include resonance (i.e., correlated action; see below) and aggregation of ideas, catalytic behaviors (behaviors that speed or enable certain activities; Kauffman, 1993), generation of both dynamically stable and unstable behaviors, dissipation of built up tension as phase transitions (Prigogine, 1997), nonlinear change, information flow and pattern formation, and accreting nodes (ideas that rapidly expand in importance and which accrete related ideas) (see Figure 1). In complex networks, ideas emerge, combine, diverge, become extinct, conflict with one another, adapt and change, and increase in complexity. The primary outputs of this complex dynamic are adaptability, creativity, and learning. This unpredictability, or nonlinear behavior, is produced by meso dynamics that are called, mechanisms. Mechanism-based theorizing is a concept borrowed from sociology that helps us to move beyond some of the limitations of variable-based approaches for processual, or dynamic, theories (Davis & Marquis, 2005; Hedström & Swedberg, 1998a). Variables are more suitable for linear causal	Uhl-Bien and Marion (2009)

	modeling and exploration of relationships among constructs rather than dynamic relationships among actors and events (Hedström & Swedberg, 1998b).	
Contexts	The contexts that shape those ideas include networks of interaction, complex patterns of conflicting constraints, patterns of tension, interdependent relationships, rules of action, direct and indirect feedback loops, and rapidly changing environmental demands.	Uhl-Bien, Marion, and McKelvey (2007)
	Define context as unplanned and uncontrolled mechanisms that emerge naturally among interactive, adaptive agents acting in situations.	Uhl-Bien and Marion (2009)
Entanglement	Entanglement describes a dynamic relationship between the formal top-down, administrative forces (i.e., bureaucracy) and the informal, complexly adaptive emergent forces (i.e., CAS) of social systems.	Uhl-Bien, Marion, and McKelvey (2007)
	Managing entanglement involves two roles: (1) creating appropriate organizational conditions (or enabling conditions) to foster effective adaptive leadership in places where innovation and adaptability are needed, and (2) facilitating the flow of knowledge and creativity from adaptive structures into administrative structures. Enabling leadership occurs at all levels of the organization (as well as within the adaptive dynamic), but the nature of this role will vary by hierarchical level and position. Entanglement recognizes that administrative and adaptive leadership must work together effectively if organizations are to function properly; therefore, entanglement refers to a dynamic relationship between the formal top-down, administrative forces and the informal, complexly adaptive emergent forces in organizations (cf. Thomas, Kaminska-Labbé, & McKelvey, 2005).	Uhl-Bien and Marion (2009)
Bonding	Bonding is the "linking up" dynamic through which CAS networks form and evolve. It occurs through processes of interaction and aggregation, and serves as the "vehicle" for emergence. Bonding is dynamic in that linkages continually form and disappear as complex systems take on different shapes and forms in relation to their environments. Bonding begins with interaction between agents (the smallest interactive unit of interest; it may be a person, group, idea, worldview, etc.). It occurs when interaction causes agents to become linked by need, preferences, outlooks, responsibilities, etc. Bonded agents act with some degree of synchrony—each agent's actions influence the behavior of the other. Interestingly, bonding need not be cooperative and can even be conflictive (e.g., competitive relationships); the basis for bonding is only that the participants function together in a way that creates interdependent actions Bonded pairs are the foundation of aggregates, and the	Uhl-Bien and Marion (2009)

	moment a pair bond becomes a multiple bonding, the dynamics of the relationship change (Krackhardt & Kilduff, 2002). Aggregated agents form alliances, they shift allegiances, and they change relative to one another in unpredictable ways—i.e., they become CAS	
Heterogeneity	Heterogeneity refers to differences in both human and physical agents, including different skill sets, preferences, information, technology, techniques, or worldviews. It is important to complex behavior because it feeds the bonding and nonlinearity dynamics of complexity. It contributes to bonding by creating the conflicting constraints that cause agents to have to work through differences and inter-resonate in ways that produce new worldviews and innovative (nonlinear) responses (Sutton, 2002). It fosters adaptive tension by pressuring the system to elaborate—to work through conflicting constraints. Without heterogeneity and the tension that comes from it, individuals hold the same worldviews/perspectives and are comfortable with their similarities; this restricts their ability and motivation to see in new or different ways.	Uhl-Bien and Marion (2009)
Disequilibrium state	Prigogine (1955; Prigogine & Stengers, 1984) showed how chemical systems can "transform" when they shift into a state far from thermodynamic equilibrium, a state that can be imposed by infusing the system with increasing amounts of energy (e.g. heat). In social systems, Osborn et al. (2002: 822) refer to this as "Context 4: Edge of Chaos;" Maguire & McKelvey (1999) call it the "region of complexity." Dis-equilibrium thus reflects a major disruption in system behavior — a new regime of significantly increased or decreased activity that pushes the system far beyond its existing (normally accepted) range of activity (McKelvey, 2004a,b).3 Dis-equilibrium can be provoked by the pursuit of a new opportunity (e.g. an entrepreneurial project/venture), a threat/crisis from the environment or from within the system, or from fluctuations that alter the entire organizational system. In our three studies the authors labeled this process as far-from-equilibrium state, increased organizing, and fluctuation dynamics. These different terms all refer to the same phenomenon: a notable movement away from stability and toward dis-equilibrium, which sparks emergent change processes.	Lichtenstein and Plowman (2009)
Amplifying actions	A second contextual condition for emergence identified in the three studies is Amplifying actions. When a complex adaptive system is in a Dis-equilibrium state it becomes highly sensitive to shifts in system dynamics, such that a small fluctuation in one part of the system can bring unanticipated and substantive changes to other parts of the system (Holland, 1975; Kauffman, 1993). In addition, these actions are increasingly "non-linear" due to the interdependent interconnections between system participants — individuals and/or groups. Whereas stable systems tend to buffer and diminish fluctuations, the non-linearity inherent in Dis-equilibrium states allows information to jump channels, become amplified, and move quickly through the system (Dooley, 1997). In so doing, small	Lichtenstein and Plowman (2009)

	changes can escalate in unexpected ways. This contextual condition existed in each of the three studies of emergence, although labelled somewhat differently: amplifying actions, tension and threshold of change, positive feedback dynamics.	
Recombination/ "Self-organization"	At the other side of the threshold, a new "level of order" in the system comes into being (Anderson, 1999; Lichtenstein, 2007; Lichtenstein et al., 2006). In one measure, this is created through a recombination of resources—a re-aggregation of some kind, that increases the capacity of the overall system to operate. Emergence is thus the outcome of the system— the creation of a new entity with qualities that are not reflected in the interactions of each agent within the system. Recombination thus "expands the pie" in a real way for all the agents in the ecology.	Lichtenstein and Plowman (2009)
Stabilizing feedback	Finally new emergent order, if it is creating value, will stabilize itself in short order, finding parameters that best increase its overall sustainability in the ecology. Stabilizing feedback anchors the change by slowing the non-linear process that led to the amplification of emergence in the first place (Sastry,1997). In so doing these role-based actions help institutionalize the change throughout the system (Chiles et al., 2004), by slowly increasing the legitimacy of the new entity.	Lichtenstein and Plowman (2009)
Enabling change behaviours	Embrace uncertainty Surface conflict and create controversy Allow experiments and fluctuations Encourage rich interactions through a culture of "relational space" Support collective action ("swarm behaviour") Create correlation through language and symbols Recombine resources Leaders are role models who accept tags Integrate local constraints	Lichtenstein and Plowman (2009)
Complex creative problem-solving skills	Associated with identifying problems, understanding the problem, and generating potential solutions Application of each of these skill sets is associated with various forms of knowledge. Knowledge and skills grow as a function of experience as leader's progress through their careers (Mumford et al, 2000).	Mumford et al, 2000
Social judgment skills	Associated with the refinement of potential solutions and the creation of implementation frameworks within a complex organisational setting	Mumford et al, 2000
Social skills	Associated with motivating and directing.	Mumford et al, 2000
Opinion	Opinion as a quadruple [Holder, Claim, Topic, Sentiment] in which the Holder believes a Claim about the Topic, and in many cases associates a Sentiment, i.e. an emotive evaluation, with the belief. Sentiments always involve The Holder's emotions or desires, and may be present explicitly or only implicitly. Sentiments are the affective parts of opinions.	Kim and Hovy (2004)
Discrepancy	The belief that a gap exists between the status quo and a desired state – that change is required	Armenakis and Harris (2002) (Armenakis et al (2007)

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Appropriateness	The belief that the approach adopted to address the gap/need is the right one	Armenakis and Harris (2002)
Efficacy	The belief and confidence in one's personal and organisational abilities to successfully implement the change	Armenakis and Harris (2002)
Principal support	is defined as the belief that change leaders, organisational leaders, one's immediate manager and one's respected peers demonstrate that they support the organisational change and are motivated to see it through	Armenakis et al (2007)
Valence	refers to the perceived personal benefit (or personal loss) one may reasonably expect as a result of an organisational change	Armenakis and Harris (2002)
Change	Change is the reweaving of actor's webs of beliefs and habits of action to accommodate new experiences obtained through interactions. In so far as this is an ongoing process, which is to the extent actors try to make sense of and act coherently in the world, change is inherent in human action, and organisations are sites of continuously evolving human action	Tsoukas and Chia (2002)
Change Outcomes	Change outcomes are the emergent, impersonal outcomes during the process of change built up from incidents and events over time. From the definition of change, outcomes are a product of actions, produced from changes in choices. Outcomes are event driven explanations built forward from observed or recorded events to outcomes (Van de Ven, 2007). They could be macro level states (e.g. isomorphism, discontinuities, disequilibrium or an emergent new order) reached and understood through event driven explanations	House et al, 1995; Lichtenstein and Plowman, 2009
Cognition	Any knowledge, opinion or belief	Festinger, 1957
Elements	The things a person knows about himself, about his behaviour and about his surroundings. These elements are then "knowledges". Some of these elements represent knowledge about oneself: what one does, what one feels, what one wants or desires, what one is and the like. Other elements of knowledge concern the world in which one lives: what is where, what leads to what, what things are satisfying or painful, or inconsequential or important etc. Knowledge includes things to which the word does not ordinarily refer – for example, opinions. A person does not hold an opinion unless he thinks its correct, and so psychologically it is not different from knowledge. The same is true of beliefs, values or attitudes, which functions as knowledges for our purposes.	Festinger, 1957
Consistency	Opinions, attitudes and behaviours tend to exist in clusters that are internally aligned/congruent/harmonious	Festinger, 1957
Consonance	Two cognitive elements are in a consonant relation if, considering these two alone, one element follows from the other.	
Dissonance (inconsistency)	Existence of non-fitting relations among cognitions Two elements are dissonant if, for one reason or another, they do not fit together. They may be inconsistent or contradictory, culture or group standards may dictate that they do not fit, and so on.	Festinger, 1957

	Two elements are in a dissonant relation if, considering these two alone, the obverse (opposite or reverse) of one element would follow from the other. x and y are dissonant if not x follows from y. *The reality which impinges on a person will exert pressures in the direction of bringing the appropriate cognitive elements into correspondence with that reality*	
Situations implying dissonance	SUB CODES? AFTER DECISION 2> ALTERNATIVES The cognitive elements corresponding to positive characteristics of the rejected alternatives, and those corresponding to the negative characteristics of the chosen alternatives are dissonant with the knowledge of the action that has been taken (and vice versa for consonant cognitive elements) FORCED COMPLIANCE Dissonance exists after an attempt has been made, by offering rewards or threatening punishment, to elicit overt behaviour that is at variance with private opinion. If overt behaviour is successfully elicited, the persons private opinion is dissonant with his knowledge concerning his behaviour; his knowledge of the reward obtained or the punishment avoided is consonant with his knowledge concerning his behaviour. FORCED OR ACCIDENTAL EXPOSURE Exposure to new information may create cognitive elements that are dissonant with existing cognition OPEN EXPRESSION OF DISAGREEMENT IN GROUP Leads to the existence of dissonance in the members. The knowledge that some other person, generally like oneself, holds one opinion is dissonant with holding a contrary opinion. COMPELLING EVENT Identical dissonance in a large number of people may be created when an event occurs which is so compelling as to produce a uniform reaction in everyone	Festinger, 1957
Dissonance reduction	The presence of dissonance gives rise to pressures to reduce or eliminate the dissonance. Three ways to reduce dissonance (1) By changing one or more elements involved in dissonant relations (2) By adding new cognitive elements that are consonant with already existing cognition (3) By decreasing the importance of the elements involved in the dissonant relations	Festinger, 1957
Dissonance reduction (situations)	POST DECISION DISSONANCE • Post decision dissonance may be reduced by increasing the attractiveness of the chosen alternative, decreasing the attractiveness of the chosen alternatives, or both. • Post decision dissonance may be reduced by perceiving some characteristics of the chosen and unchosen alternatives as identical. • Post decision dissonance may be reduced by decreasing the importance of various aspects of the decision.	Festinger, 1957

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	FORCED COMPLIANCE • If forced compliant has been elicited, the dissonance may be reduced by changing private opinion to bring it into line with the overt behaviour or by magnifying the amount of reward and punishment involved. • If forced compliance fails to be elicited, the dissonance may be reduced by intensifying the original private opinion or by minimizing the reward or punishment involved. VOLUNTARY & INVOLUNTARY EXPOSURE TO INFORMATION • The presence of the dissonance leads to seeking new information which will provide cognition consonant with existing cognitive elements and to avoiding those sources of new information which would be likely to increase the existing dissonance. • When some of the cognitive elements involved in a dissonance are cognitions of one's own behaviour, the dissonance can be reduced by changing the behaviour, thus directly changing the cognitive elements. • Forced or accidental exposure to new information which tends to increase dissonance will frequently result in misinterpretation and misperception of the new information by the person thus exposed in an effort to avoid a dissonance increase. • Dissonance introduced by disagreement expressed by other persons may be reduced by changing one's own opinion, and by rejecting those who disagree. ROLE OF SOCIAL SUPORT • The existence of dissonance will lead to seeking out others who already agree with a cognition that one wants to establish or maintain and will also lead to the initiation of communication and influence processes in an effort to obtain more social support. • Influence exerted on a person will be more effective in producing opinion change to the extent that the indicated change of opinion reduces dissonance for that person. • In situations where many persons who associate with one another all suffer from the identical dissonance, dissonance reduction by obtaining social support is very easy to accomplish.	
Values	A value is the importance we attribute to oneself, another person, thing or idea. The greater the personal meaning [of something or someone] the greater the personal payoff; the greater the personal payoff, the greater the personal value.	Saldanha (2009)
Attitudes	An attitude is the way we think or feel about oneself, another person, thing or idea.	Saldanha (2009)
Beliefs	A belief is intertwined in our set of knowledge, experiences, opinions, prejudices, morals and other interpretive perceptions of the social world. Beliefs are embedded in the values attached to them.	Saldanha (2009)
Cognitive styles	Cognitive research focuses on information processing which includes perception, processing, memory, organisation, conceptualisation, and representation of knowledge (Lofstrom, 2008)	Kozhevnikov, 2007; Lofstrom, 2008

INTUITIVE
- CONCEPTUAL/HOLISTIC
- INTERPERSONAL/EMOTIONAL

ANALYTICAL
- LOGICAL
- PROCESS/ORGANISED