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Designing purposeful action among divergent stakeholders: A 'being-doing' approach

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by

Jennifer (McKinnell) McDonogh

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Supervisor: ELSJE SCOTT

Co-supervisor: KOSHEEK SEWCHURRAN

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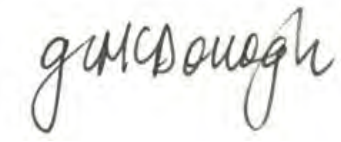

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This is the hardest thing I have ever done. I dedicate it to my darling daughter Grace. She enthusiastically and intelligently mastered trotting alone on a horse, transitions, turning on the diagonal, serpentines and circles, whilst I was editing the final draft of this document. I am so proud of her.

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Finishing this project is a delicious moment for us all.

Abstract

Designing purposeful action among divergent stakeholders: A 'being-doing' approach.

Coordinating and organising divergent stakeholders to undertake action to improve a shared situation of concern is an increasingly perplexing problem. Industry, government and academia operate in siloes, make decisions at different speeds, have disparate worldviews and value sets, and do not share the same priorities and concerns. Whilst meetings between these stakeholders are not uncommon, progressing these conversations beyond 'talk' to achieve commitment to act, requires purposeful effort.

This study investigates the persistent and relevant problem of how to design purposeful action, in a 'wicked' problem situation that cannot be solved by any one stakeholder operating alone, and in which the stakeholders do not share the same interpretation of the problem situation. Although such situations are common in cluster development, the literature on cluster development does not offer solutions as to how to design purposeful action, nor does it provide insight as to why attempts to intervene in systemic problems can result in a failure to improve the problem situation.

The study's methodology combines an ontological-pragmatic philosophical paradigm with an auto-ethnographic exploration, to uncover a framework of ideas that is tested via a single case study that includes two iterative Action Research cycles. The framework of ideas is generated through an inductive process, and is then used as a repertoire of theoretical lenses with which to explore problem situations experienced in leading an organization working in the space of cluster development. Concepts, models and ideas from Soft Systems Methodology, as well as systems dynamics (causal loop modeling), commitment management and conversations for action frameworks, the theory of action perspective on dealing with defensiveness and Model I theory-in-use, and the advanced facilitation skills of reflective practice (such as Being), are considered as part of this interpretive process.

Through experiences of disharmony and breakdown, the study also explores why the process of facilitating interventions to design purposeful action is so challenging, and emerges with a personal knowledge system model based on the framework of ideas. The study concludes by arguing for a 'being-doing' approach when facilitating interventions to design purposeful action.

Key words: Soft skills in cluster development. Applied Systems Thinking. Systems Dynamics. Soft Systems Methodology (SSM). 'Wicked' problems. Purposeful Action. Conversations for Action. Networks of commitment. Facilitation skills. Reflective practice. Mood. Thinking Environment. Interpretive Action research. Personal Knowledge System Model.

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Chapter 1: Introduction

Introduction

> *"We live in a dauntingly complex and ambiguous world, full of causal inconsistencies" (Stanford management theorist, Jim March, quoted in Martin, 2007, p. 75).*

The world is complex, mysterious and problematical (Checkland, 2000). Volatility, uncertainty, complexity and ambiguity (Johansen, 2012; Stacey, 1992) complicates efforts to address 'wicked' problems, such as the battle for talent and unsustainable growth. 'Wicked' problems were first identified by Horst Rittel in the 1960s, detailed by C. West Churchman in 1968 and defined by Rittel and Webber in 1973. They are messy problems of importance that cannot easily be stated definitively and involve many divergent stakeholders. The search for solutions is an ongoing process that never ends, and the problem itself can be a symptom of other entangled problems. Choosing possible solutions requires making a judgement call and experience does not usually help you decide. It is not possible to find any one right or wrong answer. Solutions generate unexpected results over time, that cannot be measured and often cannot be undone; and there is no ultimate test of a solution to a wicked problem (Camillus, 2008; Coyne, 2005). Dealing with a wicked problem requires putting problem setting first and paying attention to the nature of the problem itself (Martin, 2009). Furthermore, within a wicked problem environment, there is an ever-increasing need for stakeholders in business, government, academia and civil society, to engage in purposeful conversation to build shared understanding and coordinate creative action (Senge, Scharmer, Jaworski, & Flowers, 2006).

However, organisations (such as cluster development bodies) seeking to coordinate and orchestrate sense-making and collaborative action to improve 'situations of shared concern' face two key challenges: First, none of these stakeholders can address complex problem situations alone, but they "have little capacity to work together creatively" (Senge et al., 2006, p. 126). Furthermore, the more pluralistic the stakeholders are, the more difficult it becomes to orchestrate joint action. Stakeholders can be defined as 'pluralistic' when they come from different countries, cultures, backgrounds, worldviews and practices, and do not share the same sets of values. They also do not usually see the problem situation in the same way. The potential

for conflict, breakdowns, dramatic mood shifts and communication and project failures is therefore a constant threat (Denning, Flores, & Luzmore, 2010).

Second, the pressures created by complex issues tend to keep leaders in a continual 'doing' mode, with little or no time for reflection and real thinking (Kline, 1999, 2010; Raelin, 2002; Schön, 1983; Senge et al., 2006). Efforts to facilitate shared understanding of the 'big moving picture' are often dismissed as 'talk shops' or limited to one-day workshops conducted annually as adjuncts to the development of strategic plans. More often than not, the result is 'fixes' that fail (Senge, 1990; Senge, Kleiner, Roberts, Ross, & Smith, 1994).

This study investigates the persistent and relevant problem of how to design purposeful action, in a 'wicked' problem situation that cannot be solved by any one stakeholder operating alone, and in which the stakeholders do not share the same interpretation of the problem situation (i.e. are divergent and pluralistic). In thinking about these "problems", the researcher was encouraged to "think 'situation of concern' rather than 'problem'. 'Problem' implies consensual understanding while 'problem situation' or 'situation of concern' implies multiple evolving perspectives or wicked problem" (Sewchurran, personal communication via email on 21 September 2012). The background context of the study is the ambiguous and dynamic environment of cluster development and intra-organisational strategic change within an organisation attempting to intervene in complex Information Technology (IT) sector challenges, such as a critical skills shortages.

Background context

For four years (October 2009 – November 2013), I was the Executive Director of an independent Non-Profit Organisation (NPO), which was established as an Information Technology (IT) cluster development body in 1998 to develop and support the growth of a regional software and IT sector. The background context is relevant because it was a driver of many of the disharmonies that arose, and thus it makes sense to highlight this here. The organisation had a Board encompassing directors from industry, academia and government. It received most of its operational funding support from local and regional government, due to its having a legal mandate as a 'special purpose vehicle' to intervene in and develop the IT sector. In 2009, when I joined the organization, it was emerging out of a funding crisis and was under pressure to prove

its relevance in the face of the launch of an apparently competing industry-driven organization, as well as disagreement between officials from different government departments about the ability of government-funded sector development agencies to create and implement programmes that met regional economic targets for job creation, skills development and market growth. In addition, industry was struggling to solve the skills problem on its own, but tended to write off government's efforts to intervene as "talk shops" that did not go deep or wide enough to address problems such as the skills pipeline. My responsibilities included doing the work of 'cluster coordination'. Cluster organisations bring together individuals representing stakeholders across industry, academia and government to intervene to address problems that constrain economic and employment growth in a particular sector (in my case, the software and IT sector).

It is widely recognised that clusters are diverse, complex, ambiguous and dynamic and often lack clear boundaries or even a clear organising structure (Sydow, Lerch, Huxham, & Hibbert, 2011), making collective action a significant challenge. The problem's stakeholders often have competing strategic priorities, differing levels of bureaucracy, and asymmetric levels of power and authority to act on the problem (Carleton, 2009). Furthermore, clusters are increasingly incorporating stakeholders from across cultural, political and social boundaries who do not share the same value sets (Denning et al., 2010).

The dynamic and complex environment of cluster development requires that the cluster coordinator possess 'soft skills' such as asking for and receiving commitments, a capacity to enable shared sense-making and facilitate 'sensitive' conversations, an ability to build trust, and a sensitivity to shifts in mood that could undermine stakeholder commitment. In addition, facilitating in pluralistic stakeholder environments also requires that the cluster coordinator possess a capacity to observe and reflect on their own behaviour and its impact on others (Denning et al., 2010). Reflective practice, in the sense of periodically taking time to think and inquire with others as to why certain experiences are occuring, is required as an antidote to the constant pressure to take action and deliver results (Raelin, 2002). However, in the cluster development literature, the need for these skills is barely recognised.

Furthermore, the cluster literature does not highlight the importance of designing action that stakeholders consider to be 'purposeful', despite widespread recognition that "being able to act with intention, purposefully, is an important part of what makes us human" (Checkland, 2000, p.

s45). According to Checkland (2000), Sewchurran and Petkov (2007) and Yearworth, Terry, Godfrey, and Edwards (2010) purposefulness (as the activity of manifesting purpose) is an emergent, sense-making activity that is an ongoing process (or journey) that requires continuous attention. It calls for qualities such as curiosity, persistence and courage in the face of ambiguity and uncertainty. It requires a willingness to exert effort and grapple with the problem space; and a disposition to understand and articulate the diverging worldviews and needs of stakeholders who share the same problem space. Thus, the value and worth of embarking on the effortful process of taking action needs to be articulated in order for action to be 'purposeful'.

During the four years that I spent coordinating interventions to address problems such as critical IT skills shortages, I regularly found that meetings that were facilitated between the local IT industry and big business, as well as between industry in general and government, ended in conflict or stalemate, with both sides blaming one another for the problem.

In exploring this challenge, I sketched a "rich picture diagram", illustrated in Figure 1, that was used, as is recommended by Checkland (2000, p. s22), to visually represent the problem situation of IT skills shortages and lack of sector growth. It enabled us to say to different stakeholders, "This is how we see the situation at present, its main stakeholders, and the key issues. Have we got it right from your perspective?" In using the diagram as a tool in discussion with stakeholders, the question then became: How would one go about designing purposeful action in such a situation?

This diagram, shown in Figure 1, illustrates the 'wicked' problem that the pool of IT skills was small and not growing, experienced skills were in short supply, small software companies were better at training young IT talent, but as soon as young developers were skilled up, big business 'stole' them from the small companies, thus limiting their ability to grow. Big business was offshoring work instead of appointing local software companies, thus undermining their own ability to access trained up graduate skills, creating a vicious circle.

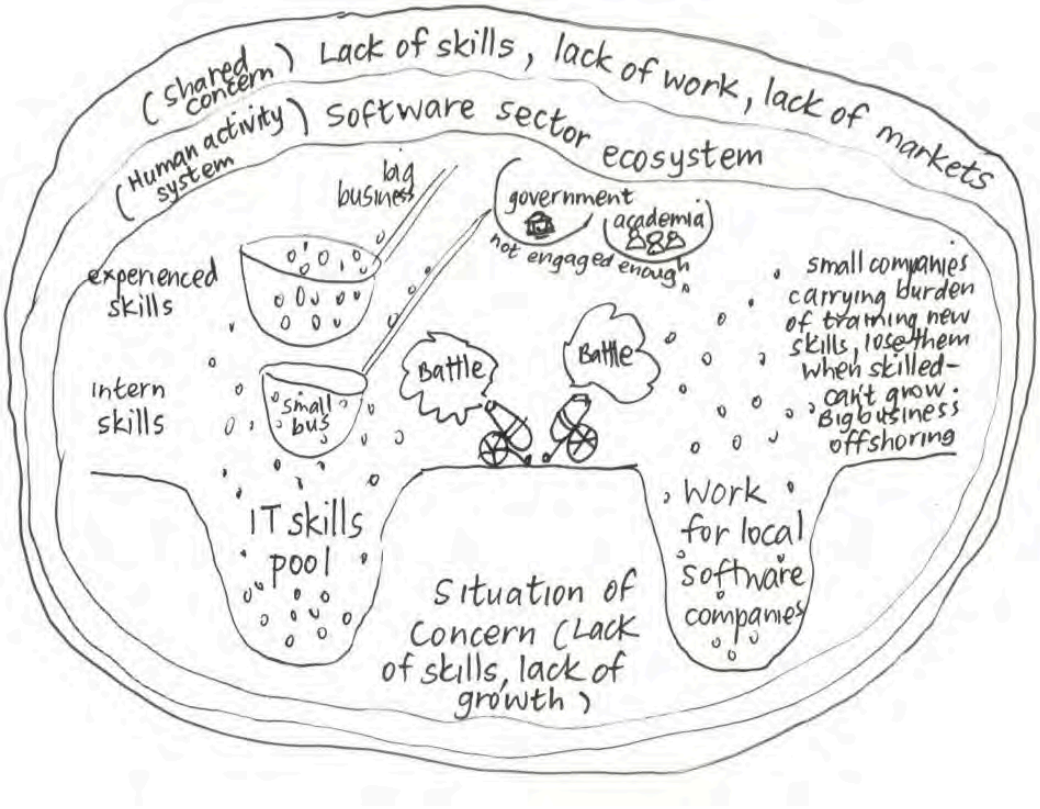

Figure 1 - Researcher's own 'rich picture diagram' of the complex, interdependent issues present in a regional IT cluster

The rest of this chapter will describe the research problem and list key research questions that were posed at the outset of the study, as well as highlight the preliminary theoretical contributions that were identified as relevant to these questions. It will then describe the research purpose, objectives and importance. Finally, the research paradigm, process and the methodology used will be explained briefly. The chapter will then conclude by providing an overview of the remaining chapters of this thesis.

The research problem

The persistent and relevant problem that this research study investigates is how to get diverse groups of people to think about complex problems in such a way that the most feasible action to improve the problem situation becomes apparent to everyone, *and* leads to purposeful action to improve the problem. As this is a "wordy" phrasing, for the purposes of the rest of this study, this research problem will be phrased as: **"how to design purposeful action among divergent stakeholders."**

Research Questions and Preliminary Theoretical Contributions

In thinking about why this issue of how to design purposeful action among divergent stakeholders was such a persistent problem, it was speculated that perhaps there was 'something missing,' either in the process of intervening that was being used, or in the thinking together about the problem, or in the way in which the interventions themselves were being facilitated.

In approaching the research problem, five questions were posed to assist in identifying theoretical contributions of relevance, and to open up inquiry into the research problem itself. These questions were influenced by the contextual situation within which the researcher was working; these including intra-organisational change management.

The first question (#1) that was posed was: **What structural "design" components should be included in an intervention to achieve the outcome of "*purposeful* action"?**

This general problem of how to design purposeful action has already been highlighted by Checkland (2000), who noted that sometimes when you bring people together to solve a problem, you find that the exact problem you are convening to tackle, is not so easy to define. As a result you need a problem structuring phase before moving to action. Checkland (2000, p. s16) notes that the real world is a "complexity of relationships" and these relationships can be explored via models of purposeful activity that are based on explicitly declared worldviews. By questioning the perceived problem situation using the models as a source of questions, an ongoing inquiry can be structured among a wide range of interested parties. 'Action to improve' the situation can then be based on finding versions of the situation which opposing stakeholders can live with. The key activities of Soft Systems Methodology and the LUMAS model as a framework for inquiring into and taking action to improve a problem situation, were found to be useful as a 'framework' on which to add other relevant theoretical contributions. This is explained in more detail in Chapter Two and Chapter Three.

The second question (#2) that was asked was: **As a facilitator, how do you ensure that the quality of thinking about complex problem situations is productive (i.e. opens up possibilities for action)?**

Senge (1990, 1994) has identified that when complex problems are encountered, the natural human tendency is to look for simple linear cause-effect solutions. However, this attempt to

simplify the complexity creates dependencies that reduce your ability to address the problem. He identified that by exploring the bigger systemic effects of actions on one another, underlying patterns (or 'archetypes') that are perpetuating a lack of progress can be identified. These 'causal loop diagrams' can operate like sense-making tools which enable stakeholders to gain insight into where the best leverage to change the problem situation can be found.

Kline (1999, 2010) has a methodology for overcoming 'thinking blocks' that get in the way of problem solving. She has discovered that the mind thinks better about problems when they are phrased as questions. Her 'Thinking Environment' framework provides a method which can be used to help individuals and teams to do 'good thinking' about problems. She offers 'Incisive Questions' as a tool for breaking through mental blocks that are based on limiting assumptions about the self and the world.

Raelin (2002, 2006, 2012) highlights the problem that we tend not to be aware of our own behaviour, and our normal cognitive processes can cause us to make incorrect assumptions. He identifies the need for reflective practice and offers the advanced facilitation skills of "being, speaking, disclosing, testing and probing" that can support reflective practice, as being helpful. In particular, he highlights the importance of the skill of 'being' because it enables us to move between states of "staying with self" and "inquiring with others" in a vulnerable, undefensive way that enables the creation of a climate suitable for reflection (Raelin, 2002) by all participants in an intervention. It is Raelin's recognition of the importance of "Being" in facilitation, which provided the courage needed to include the term "being-doing" in the thesis title. This decision was further supported by Laszlo's (2012) work on evolutionary systems thinking, but more about this in Chapter Five.

The third question (#3) that was posed was: **How do you generate the commitment that is necessary to unlock purposeful action, especially when the problem situation is 'wicked' and the problem owner is ambiguous and unclear?**

Flores (Denning et al., 2010; Flores, 2012; Winograd & Flores, 1986) has highlighted the importance of language and conversation in designing action and in generating commitment. He says conversations are the essence of action. People get things done by sharing interpretations and asking for and making commitments to one another that take care of their underlying concerns. He argues that action is coordinated in language, and developed a Basic Action

Workflow that provides a process to follow to ensure that conversations lead to action. Flores also highlights the importance of trust in making and keeping commitments and managing reciprocal relationships (Solomon & Flores, 2001; Spinosa, Davis, & Glennon, 2014).

The fourth question (#4) that was posed was: **How do you prevent conversations to design purposeful action from being undermined by defensive behaviours and bad moods?**

Argyris (Argyris, 1982, 1993; Argyris & Schön, 1974, 1991, 1996) has spoken about the problem of defensiveness. He found that when people come together to design action, they are often unaware that there is a mismatch between their 'espoused theories' and their 'theories-in-use'. People have defence mechanisms that operate to make it difficult to notice this mismatch and change it. Argyris proposes that 'defensive routines' are activated in interpersonal situations where problems are perceived to be threatening or embarrassing. This defensiveness leads to actions to bypass and cover up the threat, in so doing pushing the action out of conscious awareness where it is not possible to detect and change the problem behaviour. These defensive routines serve to perpetuate what Argyris calls "Model I" behaviour (of goal setting, seeking winning rather than losing, being rational, and helping people 'save face' rather than discuss difficult issues.) Argyris warns that Model I behaviour can trigger defensive behaviours that can lead to stakeholders 'turning against' facilitators. (This did in fact happen in a facilitated workshop held during second phase of this research study.) Argyris proposes a methodology for helping people to identify and change their underlying theory-in-use to what he calls "Model II" behaviour. A key component of Model II behaviour is sharing valid information. (Valid information is also recognised as being important by Kline (2010) who includes it as one of the ten components of a "Thinking Environment").

Flores (2012) highlights the role played by mood in opening or closing possibilities for action. He sees mood as an assessment of the future that can be changed. Denning et al. (2010) argue that managing mood is a key responsibility of leaders who need to orchestrate coordinated action in pluralistic networks.

Finally, underlying all these questions, was a deeper, more perplexing question that kept arising as action was undertaken in the 'real-world' of cluster development and change leadership between 2012 and 2014 (which was the period during which this thesis was in development). This enigmatic problem was: **"Why is the process of facilitating interventions to design**

purposeful action leading to so much personal and interpersonal disharmony and breakdown?" This question became the fifth question that was posed (ie question #5). Context is relevant to mention here. Significant struggle was being experienced around bedding down a shared organizational purpose for the group (i.e. the NPO and its subsidiary, a Pty Ltd company). A further challenge identified was how to keep the staff aligned and motivated despite the uncertainty that was created in February 2013 when the Board appointed the researcher into the overarching role of Group Executive Director (with the mission to address people issues which the subsidiary Board had been unable to resolve). These internal organizational changes and leadership challenges were experienced as more difficult than coordinating action with stakeholders outside the organization, and provided experiential learning opportunities in the area of "difficult conversations", "bad moods" and "breakdowns of trust" that influenced the direction of the research, away from a focus on purely designing purposeful action in the area of IT sector development, into the broader area of facilitating "conversations" for purposeful action between people with divergent interests. That said, the organisation's key project, a postgraduate skills programme created with industry, academia and government to train unemployed non-IT graduates to be Business Analysts, as well as to provide unemployed IT graduates with soft skills and further bootcamp-type training in software development; as well as find internships in industry and employment for them, was also a key challenge. There were funding delays, problems between interns and their host companies, internal problems in the host companies related to the challenges of the programme assignments, and innumerable other challenges that might be expected of a programme requiring divergent stakeholders to collaborate closely.

It is evident then that a number of contributions (by Checkland, Senge, Argyris, Kline, Flores and Raelin) are trying to deal with aspects of the persistent and relevant problem of how to design purposeful action to address complex problems when stakeholders are divergent. These contributions are all discussed in more detail in Chapter Two.

However, there isn't a way of tying all of them together in unison, into a single framework for intervention as a cluster coordinator or a facilitator in a complex problem situation where purposeful action needs to be taken by a diverse group of stakeholders. Through an initial auto-ethnographic interpretive research phase, the set of relevant theoretical contributions already

highlighted was selected, based on their presupposed ability to assist with answering the five questions that were posed upfront.

In summary, the research problem, related questions (or research themes) and the most relevant theoretical contributors, as identified during the interpretive research phase (which is explained in Chapter Three), are illustrated in Figure 2.

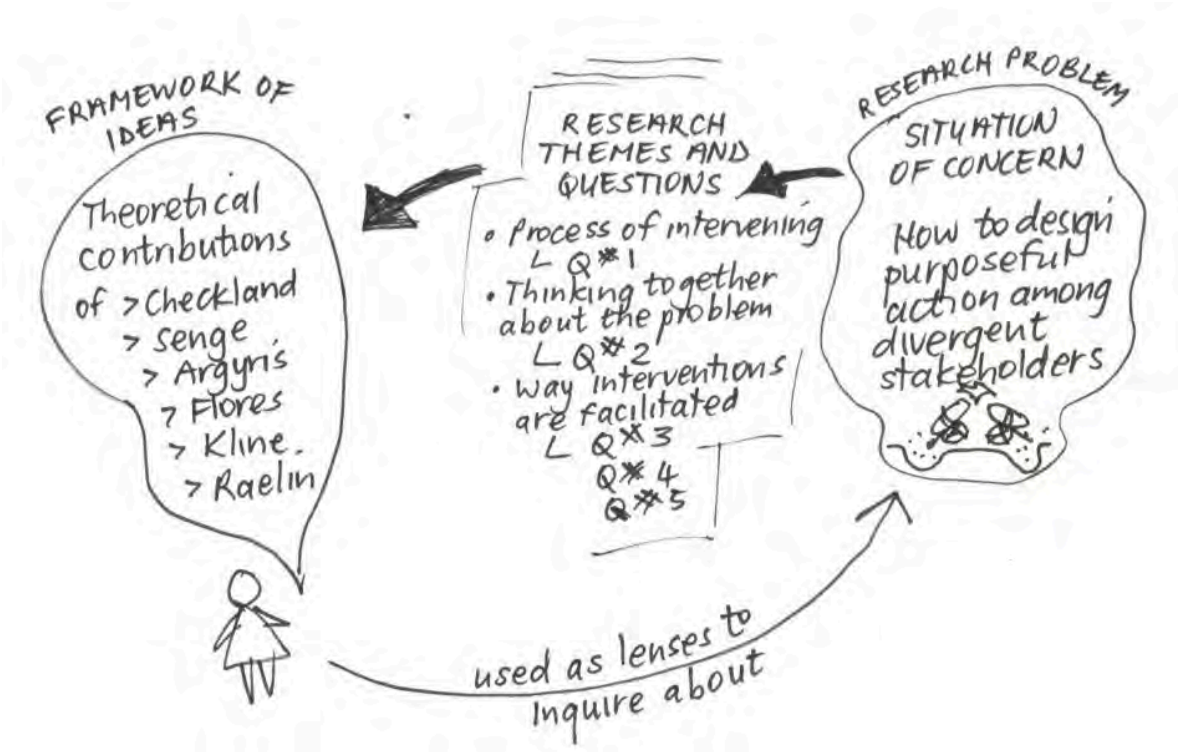

Figure 2 - Researcher's own construction of the research problem, research themes and related questions posed as mechanisms for inquiring into the research problem, and the preliminary theoretical contributions that this unearthed. (This diagram is informed by the work of Checkland (2000)

Chapter Two explores all these theoretical contributions in more detail and ends by providing a single conceptual framework of ideas as a possible answer to the question (#1) of what structural "design" components could be included in an intervention to achieve the outcome of "*purposeful* action".

Research purpose, objectives and importance

This particular study was undertaken in an environment that was complex, ambiguous and dynamic. The researcher's own organisation and the sector within which she worked was highly

politicised and fragmented. The stakeholders held divergent views, and had differing levels of ability, resources and commitment to tackle problems of shared concern. The problems that needed to be solved (such as 'graduate unemployment' and 'critical IT skills shortages') were equally complex and 'wicked'. And, most challenging of all, breakdowns in communication and relationship were experienced in the daily 'practice' of leading the organisation and facilitating conversations about what action was required. These breakdowns derailed discussions, negatively impacted human performance, and closed off possibilities for action. As Denning et al. (2010) makes clear, challenges such as these are persistent and becoming more common and more severe, particularly in the IT sector, and make exquisite coordination an elusive goal.

The background as has been described, points to some of the difficulties that must be overcome by an individual or organisation that seeks to generate any kind of purposeful action among diverse groups of people. There is a need to investigate more sensitive and more exquisite ways to conduct a sense-making 'inquiry' with divergent others in order to understand problem situations as they are unfolding over time, and generate committed and purposeful 'action to improve' the situation. Within the cluster development space, there was also acute awareness of a clear need to discover or evolve a 'knowledge system' that could provide a way to combine relevant ideas from theorists who were struggling with similar problems in other disciplines, and use them together in a single framework for intervention as a cluster coordinator or a facilitator.

The purposeful objective of this study is therefore to attempt to evolve an intervention framework and practice, with which to facilitate the design of purposeful action among divergent stakeholders, without there being disabling disharmony and breakdown.

In addition to the reasons already cited, this study is important because the learning that is generated in this thesis is relevant for intervening in *any* human activity system, be it a cluster, sector, or organisational challenge, where stakeholders are diverse, problems are complex and organising action to leverage positive change requires collectively generating purposeful conversations that build the shared understanding and coordinated action that is needed to improve situations of joint concern.

Research paradigm and methodology

The direction of this study was informed by personal interests in 'being-in-the-world' (and how one's being is affected by challenges such as conflict in work environments) and 'doing-in-the-world' (and how to generate positive social action). As a result, the study is framed by an underlying personal philosophical paradigm influenced by phenomenological and pragmatic approaches to 'wicked problems' and our difficulties in being 'rational' in addressing them.

The research paradigms used are those of Interpretive Research and Action Research (as it is viewed within Soft Systems Methodology).

The study's methodology has two phases. The first phase comprises an inductive approach based in ethnographic research methods, which culminates in theoretical concepts, ideas and models being selected and used to build a conceptual 'bridge' to use when intervening as a facilitator (or a cluster coordinator) to design purposeful action among divergent stakeholders. This framework of ideas is illustrated at the end of Chapter Two, which discusses the ideas and concepts that were selected inductively during the interpretive phase in sufficient detail to ensure that the study's conclusions make sense to a reader who may not have been exposed to these ideas before.

The second phase consists of two action research cyles (action experiments) to test and refine the (emergent) theoretical framework within a single case study of a social housing non-profit organisation. This is described in Chapter Four.

The conclusions include findings specific to the action research interventions as well as the plausibility of the conceptual framework of ideas. In Chapter Four, further reflections are made and the work of Austen (2010) on generating artistry using a Knowledge Systems model is used to suggest modifications to the conceptual framework.

This chapter has outlined the research problem, key research questions, preliminary theoretical contributions, research purpose and importance, research philosophical paradigm, process and methodology. It will conclude by providing an overview of the remaining chapters of this thesis.

Organisation of the thesis

This thesis is organised into five chapters. The remaining four chapters will cover the following:

Chapter Two provides a theoretical framework for the study. It describes the framework of ideas that was adopted, states why these ideas were considered relevant, and concludes with the possibility of using all these theories together in unison to create a single framework for intervention.

In **Chapter Three** the philosophical paradigm that informs the methodology is described, as well as the methodology itself. The chapter argues that two research paradigms would be of value to the study. A first phase needed to be an auto-ethnographic interpretive study, during which theoretical concepts would be brought to light inductively, and then used to build an (emergent) theoretical framework. (This framework was illustrated at the end of Chapter Two.) In addition, a second phase of action research would be required in order to test the theoretical ideas in a 'real world' case study. The chapter discusses both approaches, with a particular focus on distinguishing what is required in order to claim to be conducting action research in an SSM way.

In **Chapter Four** a case example in which the researcher enters a real-world problem situation as a facilitator, to assist the CEO of a social housing NPO to take her Board and senior management team through a process of sense-making and identification of purposeful action to pursue, is presented. This intervention is designed using the framework of ideas that was generated inductively in the interpretive research phase. The action research comprises two action research (AR) cycles. In AR Cycle One, a one day workshop with Managers and the CEO is facilitated to generate a shared understanding of the organisation's problem situation. In AR Cycle Two, which is held ten days later, a team (including the researcher) facilitates a 1½ day workshop with the Board, Managers and the CEO. The findings from these action research cycles are reported in this chapter. Thereafter the possibility is explored of incorporating Austen's Knowledge System Model into the framework of ideas.

Chapter Five contains reflections, conclusions and suggestions for future research. This final chapter provides a synthesis of the learning. A key conclusion is that whilst all the contributions selected in the interpretive phase have value in different circumstances, ensuring that disharmony and defensiveness does not cause 'breakdown' requires more than just conceptual knowledge. Thinking alone is not enough and 'being' is also required. The concepts of 'systems feeling' and 'systems being' as proposed by Laszlo (2012) are used to expand the study's initial framework

for intervening, and suggest a direction for future research. The chapter concludes by calling for a 'being-doing' approach in facilitating the design of purposeful action.

Note explaining why all diagrams are hand-drawn by the researcher

Personally hand-drawn diagrams are *deliberately and consciously* used throughout the thesis. The drawings are either 'looser' representations of models and concepts that are more rigorously drawn by the theorists that developed them, or are simply personally drawn copies of hand-sketched diagrams by writers working in the field of SSM (in which such loose pictures are common practice). Many of the drawings are also the researcher's own constructions.

In electing to use only personally hand-drawn diagrams in this thesis, Soft Systems Methodology's use of 'rich picture' drawings is being consciously adopted. There are three reasons for this: First, hand-drawn drawings remove the "apparent certainty" that is conveyed by straight arrows and rectangular boxes (Checkland, 2000, p. s19), and reminds the reader that the real world is in constant flux and is not so "certain" or so easily defined. Second, loose drawings foreground the fact that these are working models, that are selected by the researcher and are therefore 'user-dependent.' Finally, rough drawings look more human (Checkland, 2000, p. s20) and this study is fundamentally about coordinating human activities to organise action.

Whilst the diagrams expand the length of the thesis (in terms of page numbers), it is argued that they support the study's argument and make it clearer and easier for the reader to follow the case that is being argued for the study's framework of ideas.

Note explaining why footnotes are used

This thesis can be read without reference to the footnotes. Nonetheless, footnotes have been included in order to provide the reader with additional contextual and other relevant information that supports the case for the authenticity, plausibility and credibility of the ethnographic interpretive account. Footnotes are also used to provide additional explanatory information related to the study's philosophical paradigm.

Note too that British English spelling has been adopted and not American spelling. As a result, "s" is used instead of "z" in this thesis, in words such as "organise" and "recognise", except where direct quotes are made.

Chapter 2: Building a framework of ideas

Introduction

This chapter describes the ideas that emerged inductively through an interpretive research approach. As 'cluster development' was the context within which the researcher was working, the starting point was to investigate to what degree 'soft skills' have been studied in literature on cluster development. The theories selected were almost all developed or strongly influenced by individuals (Peter Senge, Peter Checkland, Fernando Flores, Chris Argyris, Nancy Kline and Joseph Raelin) who practiced and tested their theories and methods in a diverse range of real-world conditions and reflected on and refined their methods and tools based on disharmonies and insights that arose in practice. Their work resonated with the researcher's own experiences in her world of leading sector development and organizational change. As is highlighted in Chapter One, five questions were posed as mechanisms to inquire into the research problem, and these questions also informed the selection of theorists. The questions and the relevant contributions are indicated in the Table 1:

Table 1 - Table listing key research questions and related contributions covered in Chapter Two

#	Question (Area of Inquiry)	Relevant contributions
1	What structural "design" components should be included in an intervention to achieve the outcome of "*purposeful* action"?	Senge, Checkland, Flores, Argyris
2	As a facilitator, how do you ensure that the quality of thinking about complex problem situations is productive (i.e. opens up possibilities for action)?	Senge, Checkland, Argyris, Kline, Raelin
3	How do you generate the commitment that is necessary to unlock purposeful action, especially when the problem situation is 'wicked' and the problem owner is ambiguous and unclear?	Checkland, Flores, Argyris
4	How do you prevent conversations to design purposeful action from being undermined by defensive behaviours and bad moods?	Argyris, Flores
5	Why is the process of facilitating interventions to design purposeful action leading to so much personal and interpersonal disharmony and breakdown?	Argyris, Flores, Kline, Raelin

The rest of this chapter reviews the cluster development literature, as well as highlighting key concepts, models and frameworks from contributors such as Checkland (2000), Argyris (1974,

1982, 1991), Senge (1990, 1994, 2006), Kline (1999, 2010), Flores (2012), and Raelin (Raelin, 2002, 2006, 2012). This literature review has been organised by key theoretical contributor. However, it is acknowledged upfront that many of these theorists worked with other contributors as well. This chapter concludes with support from Walsham (2006) for the selection of theories in the manner followed by the researcher.

Review of cluster development literature

The interpretive phase of this study was conducted whilst the researcher was employed as the Executive Director of a 'sector development agency' with responsibility for facilitating initiatives to develop the Information Technology (IT) cluster within a geographical region of South Africa. Clusters were originally defined by Michael Porter in 1998 as geographic concentrations of interconnected companies, specialised suppliers, service providers, firms in related industries, and associated industries in a particular field that compete but also cooperate (Porter, 1998, p. 197). The definition now increasingly includes government and academia.

A review of the field of 'cluster development' reveals that the importance of soft skills such as building purposeful action, facilitating sense-making and building trust and commitment, is missing in the literature on clusters. Reports and publications on cluster and sector development over the past fifteen years have been primarily concerned with the following areas: cluster development as an economic instrument and a means for building the competitiveness of regions (Ketels, Lindqvist, & Solvell, 2006; Wares, 2008); the forces behind cluster formation and growth (Lucas, Sands, & Wolfe, 2009); cluster case studies and comparisons of clusters in different regions and sectors (Solvell, Goran, & Ketels, 2003); the evolution of clusters (Solvell, 2008); tools and processes for implementing cluster initiatives, such as cluster mapping and cluster analysis (Shakya, 2009); characteristics of successful clusters (Solvell et al., 2003); clusters and innovation (Solvell, 2008); clusters and investment (Kamel, Mohamed, & Mohamed, 2009); monitoring and evaluation of clusters (Solvell et al., 2003), (Solvell, 2008), (Shakya, 2009); and the role of government and policy implications (Shakya, 2009; Wolfe & Bramwell, 2010). Whilst the importance of relationships and collaboration is recognised (Kamel et al., 2009), this importance is limited to facilitating the flow of information and knowledge, and building functioning networks and partnerships, as well as local and global linkages (Ecotec, 2003; Lucas et al., 2009; Wares, 2008). The importance of 'civic capital' in intensifying and

formalizing collaborative networks within and between partnerships is also recognised as important (Lucas et al., 2009), but there is very little attention to how this is built in practice.

Where lack of coordination is recognised to be a problem (Wolfe & Bramwell, 2010), equally scant attention is given to "how" to improve coordination efforts. In addition, whilst it is noted that clusters facilitate cooperation and trust (Solvell, 2008), scant attention is given to how trust and commitment is built. Even less attention is given to the importance of facilitation skills in designing and building purposeful action, except to note that strong leadership is needed for developing a vision and for championing future strategies (Ecotec, 2003). Flores notes in an interview with Fisher (2009, p. 12) that in pluralistic environments "we need a human being that is skillful in shifting realities and in coping with shifts," but here is little recognition in the cluster literature of this need for adaptability either.

A recent review of the literature on clusters and leadership (Sydow et al., 2011) found that despite the obvious but very diverse role of leadership in clusters, leading in clusters has hardly been studied. Leadership is seen as a facilitation function rather than a decision-making function, and given that cluster managers act through a wide range of partnerships, their leadership role is not recognised. The authors find that whilst leadership practices are identifiable in a cluster, this leadership is hardly visible and the question of leadership does not come up in conversations about clusters unless it is prompted. Sydow et al. (2011) find that leadership, as an organising practice, becomes institutionalized by being hidden behind cluster structures (and is reduced to rules and resources). This makes it harder for cluster participants to articulate the actuality of leadership, particularly where structures are distributed across geographical boundaries. Nonetheless, it is implied that facilitation is a key skillset expected of cluster coordinators. This lack of cluster-specific literature on how to intervene and facilitate sense-making, and build shared purpose, commitment and trust when intervening in a regional cluster, necessitated expanding the literature review beyond sector development.

The first two research questions this study asks are: "What structural 'design' components should be included in an intervention to achieve the outcome of purposeful action?" (Question#1) and "… how do you ensure that the quality of thinking about the problem situation is productive?" (Question#2). Together they point to the pernicious reality that complex issues do not get the quality and quantity of urgently needed thinking and reflection they require, and

actions are too often undertaken without sufficient shared understanding of the 'whole' problem (Senge et al., 2006). How then should one think about a complex problem? In the next section, the concept of 'systems thinking' and the contribution of Senge (Kofman & Senge, 2001; Senge, 1990; Senge et al., 1994; Senge et al., 2006) to understanding the 'dynamic complexity' of systems, is explored as a possible mechanism for unpacking complex problem situations. These contributors' concepts and models are described in sufficient detail to ensure that a reader who may not be familiar with these specific conceptual ideas will be able to appreciate how it came to be that the researcher considered these ideas to be relevant to include in a single framework for intervening (that is illustrated at the end of this chapter.)

Senge: Systems dynamics and archetypes

Senge (1990) set out to examine the question, "How do we think?"[1] In the process he identified "systems thinking" as the "conceptual cornerstone" of five "component technologies" or "disciplines"[2] (Senge, 1990, p. 69). So how do we think? Senge (1990) found that typically we do not think systemically. Instead, we are prisoners of the system of our own thinking. He highlights seven learning disabilities he found in people in organisations that illustrate this. Through the example of the beer game, he shows that because human beings tend to "become their position" in organisational environments, they do not see how their actions affect the positions of others. When problems arise, they blame others as if the "enemy is out there". When they do get proactive, they make things worse. As human beings, we have "the illusion of taking charge" but our proactiveness is really reactiveness in disguise because we don't see how we are contributing to our own problems. Since problems tend to get worse slowly, like "boiled frogs", we don't realise how bad things are until it is too late. Even worse, we don't learn from our experience because we never directly experience the consequences of our most important decisions, despite being deluded that we have in fact learnt something. As team members, we end up fighting for turf and trying to look good, creating a "myth" of cohesiveness that allows us

[1] He also examined "what we truly want, and how we interact and learn with one another" (Senge, 1990, p. 11).

[2] The other four disciplines are "personal mastery," "mental models," "building shared vision" and "team learning." Systems thinking tries to help you see your connectedness to the world, as well as the interdependencies between your actions and your reality. It also tries to expose the assumptions that you make (Denning et al., 2010, p. 31; Michael Jackson, 2003; Senge, 1990).

to avoid painful learning (Senge, 1990, pp. 18-25). (Argyris describes this as "Model I" behaviour, but more on this later.) (The researcher experienced these "disabilities" in herself and in others whilst an Executive Director[3]).

Senge (1990) views systems thinking as a perspective, a set of principles, a sensibility, a framework, a language and a discipline (1990, pp. 68-69) for noticing the "structures that underlie complex situations" (Senge, 1990, p. 69). It is a mechanism for "seeing interrelationships rather than linear cause-effect chains" and for "seeing processes of change rather than 'snapshots'" (Senge, 1990, p. 73). As such, Senge's systems thinking allows you to notice and make sense of structures, interrelationships, processes and forms of leverage that you did not previously notice, that influence and produce the behaviour you see in the world of organisations. It offers causal loop models as a "circular" language to use to highlight sets of dynamic variables or elements that influence and affect one another in perpetual cycles, and change over time (Senge, 1990). Senge's work is an example of the 'Systems Dynamics' methodology of applied systems thinking (Flood, 2010).

Sense-making using systems thinking requires appreciating that there are multiple levels of explanation in any dynamic, complex situation and it is only by addressing underlying systemic structures that patterns of behaviour can be changed. Senge (1990) identified certain structural patterns that repeat again and again like stories. He calls these patterns "archetypes" (Senge, 1990, pp. 94-95). Archetypes are constructed from the key structural building blocks of systems thinking, namely - reinforcing and balancing feedback processes (loops, cycles), and delays. It is necessary to explain these, before providing an example of a dynamic system model that the researcher developed to illustrate the 'wicked problems' within her own organisation.

In systems thinking, "feedback" means a "reciprocal flow of influence" in which every influence is *both* a cause *and* an effect (Senge, 1990, p. 73). Delays are interruptions in the flow of influence that make the consequences of actions occur so gradually that they are often unnoticed and can lead to instability and breakdown in the system "eventually" (Senge, 1990, p. 80, 89). Reinforcing feedback processes result in patterns of behaviour that amplify (often very quickly) to either accelerate growth or accelerate decline. The image of a snowball rolling down a

[3] Ethnographic reflections in this regard are available on request.

mountain, or an R with a circle around it, is used to indicate a reinforcing loop (Senge, 1990). Balancing feedback circles are self-correction processes that seek to stabilise patterns of behaviour and can be difficult to notice. The balancing loop always operates to reduce the gap between what is desired and what exists in reality (Senge, 1990). The image of a scale (or seesaw) in balance or a B with an arrow around it, is used to indicate a balancing loop. Used together, these building blocks can narrate a story about how the underlying systemic structures are creating a certain pattern (or set of patterns) of behaviour. They can also point to where the areas of high and low leverage for change in the pattern(s) of behaviour might be found (Senge, 1990, p. 69).

In the interpretive phase of this study the researcher undertook an analysis of her own organisational eco-system and identified "Limits to Growth" and "Shifting the Burden" archetypes in operation. In a "Limits to growth" archetype, a reinforcing (amplifying) process is set in motion to produce a desired result. It creates a spiral of success initially but this cannot be maintained indefinitely, and a balancing (stabilising) process eventually slows down the growth, and can even turn into a vicious circle of negative growth (Senge, 1990, p. 95). A Limits to Growth archetype drawn from the researcher's analysis of her own organisation can be explained as follows: The problem was financial sustainability. The government funder priorities were shifting and there was a risk that funding would be cut. To generate additional funding and increase sustainability, a skills project was created. The success of this project led to more projects being funded in a short space of time and this generated further revenue (This is the reinforcing loop). However, over time, the rapid increase in skills projects led to HR problems such as staff burnout. The delay in addressing this problem by hiring more staff and coaching managers to lead bigger teams undermined the organisation's ability to deliver skills projects (this was the balancing loop), which then undermined financial sustainability as the organisation could not take on as many projects as the funders were willing to fund. This perpetuated the problem of financial sustainability and impeded growth.

In a "Limits to growth" archetype, the leverage comes from the balancing process. The solution was not to push growth (ie not to create more projects), but rather to remove the human resource factors that were limiting growth (Senge, 1990, p. 95).

A Limits to Growth archetype drawn from the researcher's analysis of her own organisation, is illustrated in Figure 3[4].

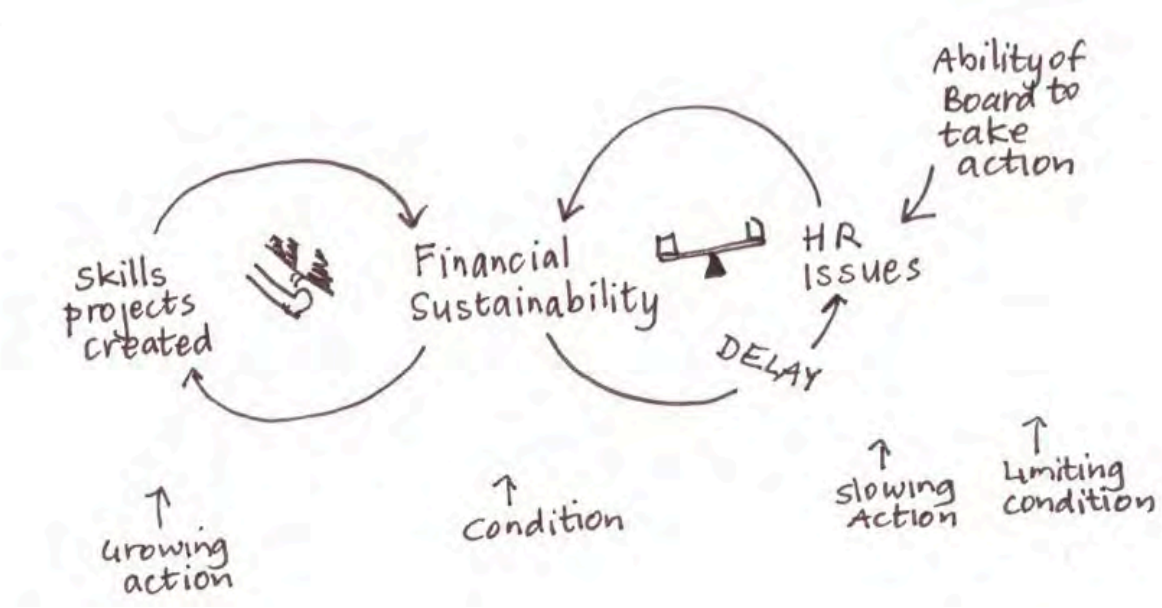

Figure 3 - Example of a Limits to Growth Archetype identified by the researcher in her own organisation

The "Shifting the burden" archetype is composed of two balancing processes which are both trying to adjust or correct the same problem symptom. The first process (represented by the top circle in Figure 4) illustrates the symptomatic intervention (usually an obvious symptom or a quick fix that creates the feeling that the problem has been solved). The second process (represented by the bottom circle) is also a balancing process, and represents the fundamental solution. However, there is usually a delay, which shifts attention away from the underlying (usually difficult to address) problem. This archetype usually has an additional reinforcing process that is created by (unintended) consequences of the symptomatic solution, that undermine the system's ability to solve the underlying problem (Senge, 1990).

In Figure 4, a Shifting the Burden archetype identified in the researcher's own IT cluster organisation, is illustrated. Here the problem was that staff were overstretched by the increased projects and were burning out as a result of being on the treadmill of constant pressure to act

[4] For reasons of confidentiality, the causal loop diagrams from the case study used in the second Action Research Cycle cannot be shared in this study. However the researcher's own organizational challenges were very similar to those in the case study.

(which was alluded to in the opening paragraph of this thesis.) Despite recognising a need to think, the researcher was so busy she just did not make time to reflect on why she felt like a 'victim' of the system. Board members intervened with a quick fix to hire consultants, and there was not a recognition of the bigger need to develop leader abilities to think about the problem of growth that was the result of the reinforcing loop described earlier. Over time the organisation became dependent on consultants[5], thus creating the second effect that is illustrated in Figure 4.

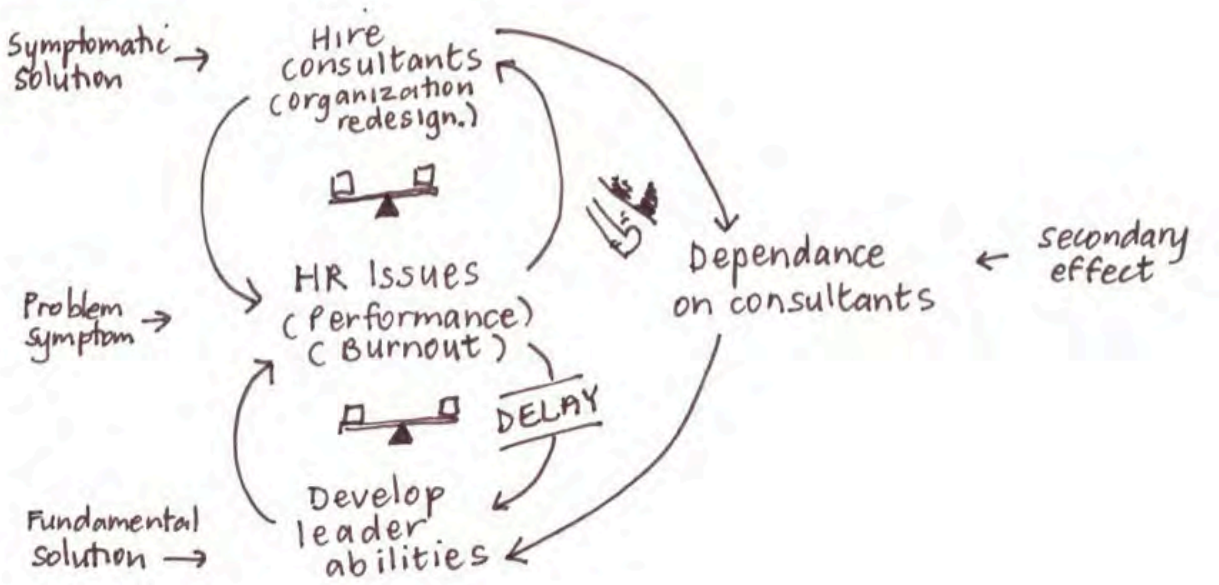

Figure 4 - Example of a Shifting the Burden Archetype identified by the researcher in her own organisation

In "Shifting the burden" archetypes, the leverage comes from "strengthening the fundamental response and weakening the symptomatic response" (Senge, 1990, p. 111). What was needed was more systemic thinking, the drafting of a systems dynamics model of the bigger challenges, and more development of the organisation's leaders, and less dependence on consultants (who have not (yet) succeeded in solving the HR problems.)

The researcher constructed a causal loop model of the dynamics underlying the organisational change process in her own organisation in January 2014. This can be illustrated as follows:

[5] The researcher burned out and eventually resigned with effect from 30 November 2013. In the year since, there have been four 'caretaker' CEO-consultants.

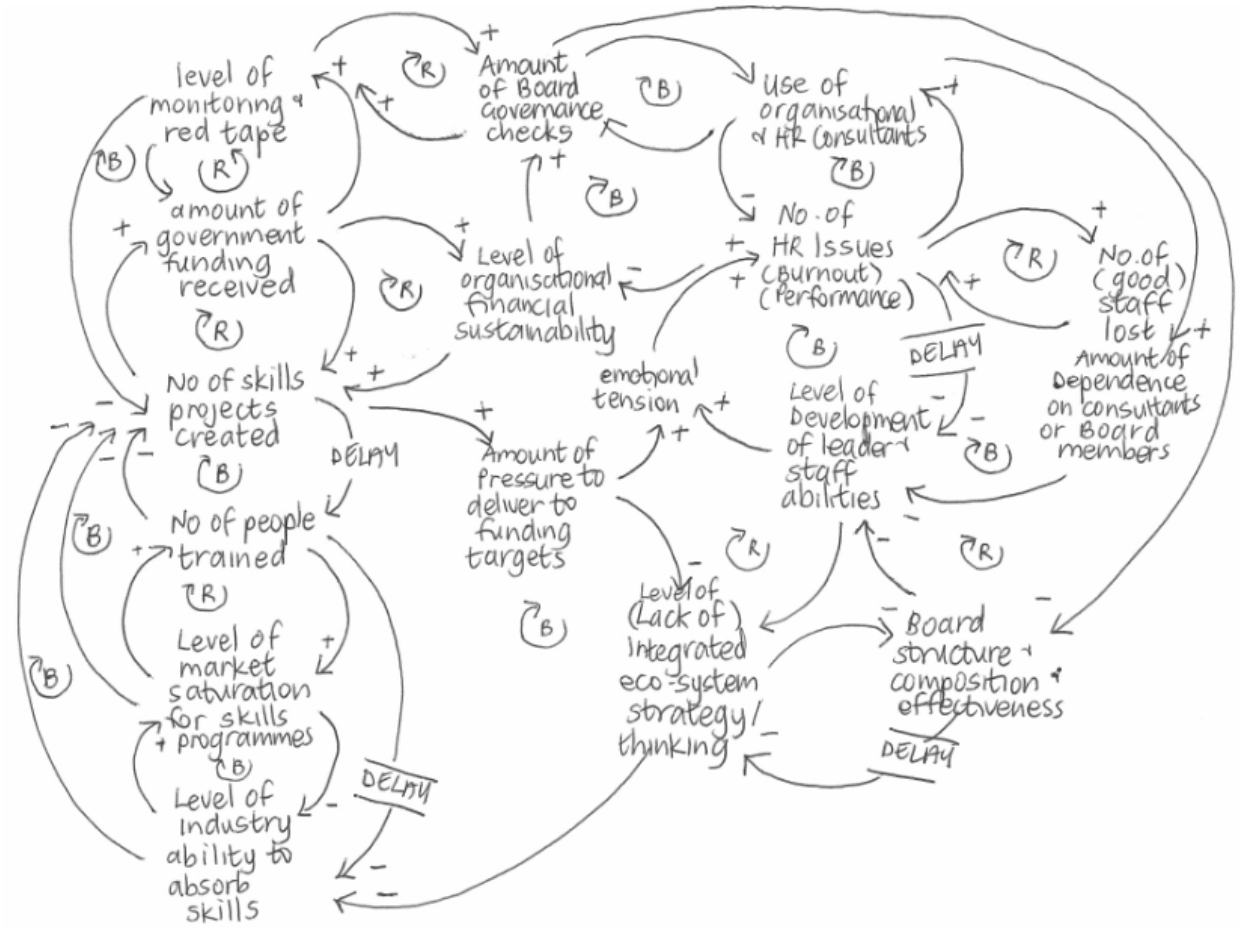

Figure 5 - Researchers's own construction of Systems Archetypes operating in a regional cluster organisation

In mapping out the organisation's own system's dynamics, using Senge's concepts, the researcher realised that causal loop modelling might be a valuable process for making sense of problems in situations of dynamic complexity where cause and effect is not linear, and different stakeholders' actions can have unintended side effects on other stakeholders in the system. As a result, the possibility that analysis of problem situations using systems dynamics (causal loop models) could be included as a "structural" component in a process to design purposeful action was identified. This was tested in Action Research Cycles One and Two with differing results (the reasons for which are described in Chapter Four).

However, a weakness of Systems Dynamics from the perspective of this study, which is highlighted by Michael Jackson (2003), is that whilst systems dynamics can be applied to complex problem contexts, its participants are typically homogenous and 'unitary'. Jackson

(2003, p. 24) organises applied systems approaches on a grid that compares them based on whether they apply to simple or complex problem contexts, and whether the participants are unitary, pluralistic or coercive. He classifies Senge's 'systems dynamics' methodology as having unitary participants and complex systems. He classifies soft systems approaches as pluralistic, and stretching across simple to complex systems. In unitary systems people have similar values, beliefs and interests, share common purposes and are *all* involved in decision making (Michael Jackson, 2003). This is a limitation in pluralistic networks with diverse stakeholders, such as IT clusters. The problem of "designing purposeful action among divergent stakeholders" requires an approach that can deal with complex problem contexts, *and* be helpful in inquiring into situations where stakeholders have different values, beliefs, interests and purposes. In these cases, decisions have to be based on accommodations and compromises, increasing the need for facilitators who are skillful at conflict management. Jackson (2003) identifies that unlike 'systems dynamics' approaches, 'soft systems approaches' are able to stretch across simple to complex systems, *and* accommodate the challenges provided by pluralistic participants (Jackson, 2003, p.24).

According to Flood (2010) Systems Dynamics sits on the border between systems thinking and *systemic* thinking. Soft Systems Methodology is more firmly based in systemic thinking. In the next section, the difference between systems thinking and systemic thinking is explored; the key concepts of Soft Systems Methodology are highlighted; and a learning model for inquiring into problem situations is proposed as a possible "structure" upon which to design interventions to generate purposeful action.

Checkland: Soft Systems Methodology (SSM)

Soft Systems Methodology (SSM) emerged out of 30 years of practice and action research by Peter Checkland and others, many of them linked to the University of Lancaster. The impetus for its development was a reaction to the "hard" systems methodology of engineering. The system that 'soft' systems methodology concerns itself with, is not a thing that exists in the world (like a 'legal system' or an 'HR system') but rather a **process of inquiring** into the "system-ness" of the world (Checkland, 2000, p. s14).

SSM's systemic way of inquiring into systems, makes it a useful "problem sense-making tool" (Sewchurran & Petkov, 2007). It helps people identify ways of understanding and exploring the "perplexing difficulties of taking action, both individually and in groups, in order to 'improve' a situation" (or, in SSM terminology, a 'situation of concern' or "problem situation which is typically complex and problematic[6], and constantly in flux" (Checkland, 2000, p. s12)). SSM recognises that the best you can hope for in wicked (unsolvable) problem situations is 'action to improve' the situation (Checkland, 2000).

In SSM, the word "system" is applied not to the world itself, but to people's process of dealing with the world (the human activities they engage in, in other words) (Checkland, 2000, p. s14). It is the *process of inquiry* that is systemic, not the world that is systemic.

For the sake of ensuring clarity on word meanings, it should be noted that systems thinking is broadly understood as thinking about how things interact with one another; systematic thinking is thinking methodically by carrying out step-by-step procedures; and systemic thinking is thinking that aims to find systemwide insights into complex situations and problems (Bartlett, 2001; The Grammarist, 2014). Grammatically, systemic can be defined as follows:

> *"Systemic, which is narrower in definition [than systematic], means systemwide or deeply engrained in the system. It usually describes habits or processes that are difficult to reverse because they are built into a system" (The Grammarist, 2014).*

Checkland (2000, p. s49) says:

> *"'Systemicity' means 'having the property of system-like characteristics'. Hard systems thinking assumes that the world is a set of systems (i.e. is systemic) and that these can be systematically engineered to achieve specific goals and objectives. Soft systems thinking, by contrast, assumes that the world is problematic, and it also assumes that the 'process of inquiry' into the problematic situations that make up the world can be organised as a system. In other words, assumed systemicity is shifted: from taking the world to be systemic to taking the process of inquiry to be systemic."*

[6] SSM assumes that the world is very complex, and grapples with what Senge (1990, p. 72) calls "dynamic complexity;" Martin (Martin, 2009) refers to as "wicked problems;" and Austen (2010) refers to as "enigmatic problems."

It is the shift of systemicity (or 'system-ness') from 'the world' to 'the process of inquiry into the world' that distinguishes hard and soft systems thinking from one another, according to Checkland (2000, p. s17). The key difference between a "hard" and a "soft" system can be illustrated as follows:

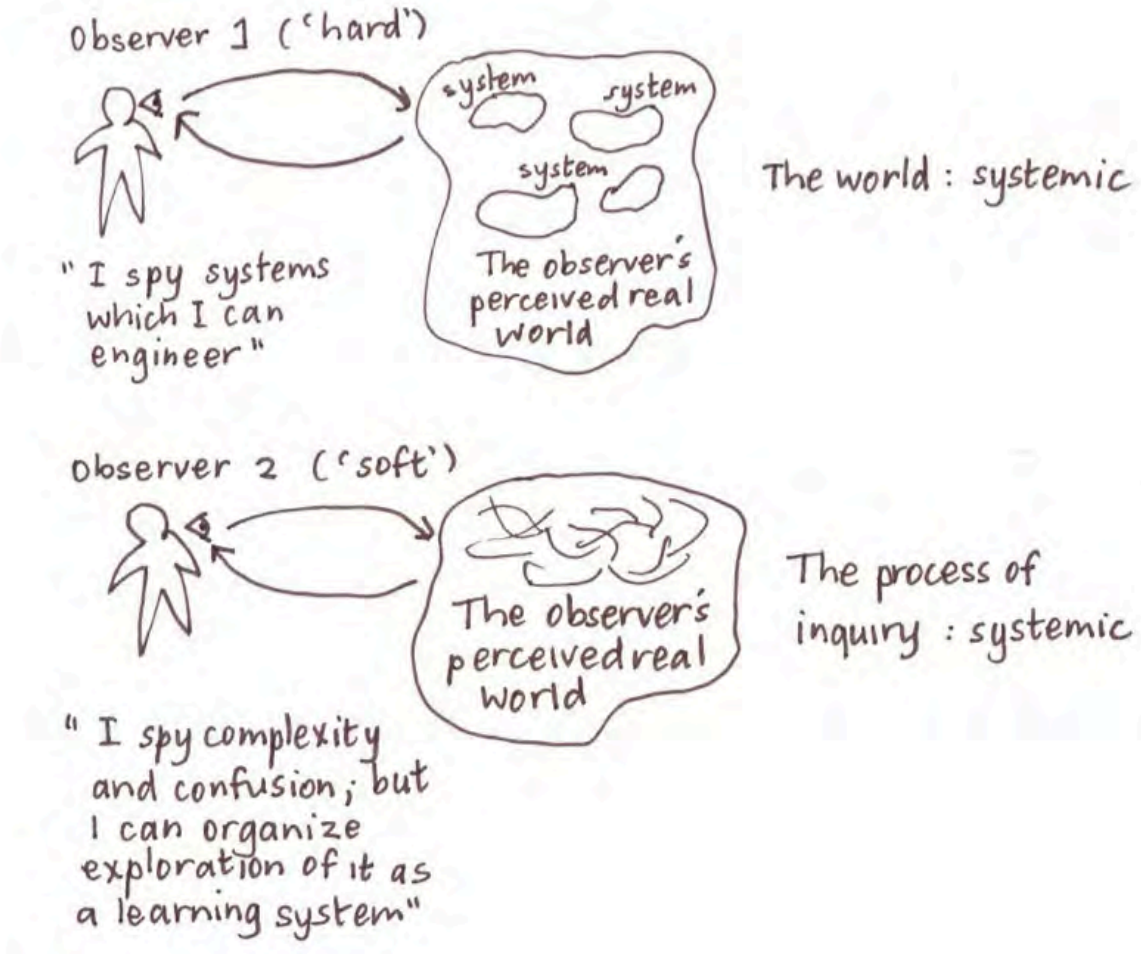

Figure 6 - The hard and soft systems stances (SOURCE: Checkland, 2000, p. s18)

Checkland (2000) sees SSM as mapping very closely to an appreciative process in action. The recurring dynamic within an "appreciative system" (illustrated in Figure 7) involves noticing (an aspect of) a reality; judging it in terms of facts and value (and then comparing it against standards drawn from the past history of the system itself); and seeking to take action to maintain relationships, rather than achieve goals (Checkland, 2000, p.s54). This connection enables SSM to remain aware that events take place in flux over time. A model of the dynamics of an appreciative system can be illustrated as follows:

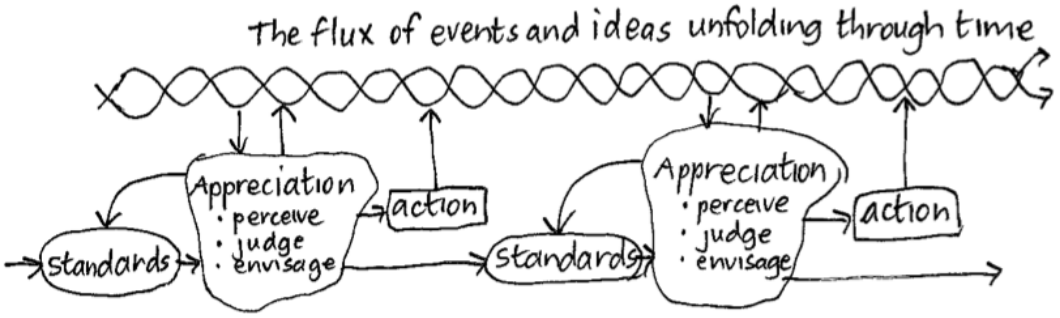

Figure 7 - The Dynamics of an Appreciative System (SOURCE: Checkland, 2000, p. s52)

Checkland (2000) draws from Vickers the notion that events unfold dynamically through time in a 'two-stranded rope' in which the strands are inseparable and continuously affecting one another. Another key concept derived from Vickers is that action to improve the problem situation can be thought about in terms of managing relationships (rather than achieving goals) (Checkland, 2000, p.s54). The process is recursive and it is a learning process. The flux of events and ideas generates appreciation and appreciation itself contributes to the flux (Checkland, 2000, p. s51). Checkland (2000, p.s45) acknowledges that, at a fundamental level, articulating human activity processes in the form of Vickers' appreciative system, "makes possible an abstraction into the realm of 'being human' as an ultimate concern of SSM" (Checkland, 2000, p.s45). Checkland notes (2000, p. s21) that:

> *"It is their history which determines, for a given group of people, both what will be noticed as significant and how what is noticed will be judged. It reminds us that in working in real situations we are dealing with something which is both perceived differently by different people and is continually changing".*

He also asserts that: "Being able to act with intention, purposefully, is an important part of what makes us human" (Checkland, 2000, p.s45). The key difference between appreciative inquiry and SSM lies in their stopping points: In appreciative inquiry the intention is (just) to understand. In SSM inquiry the ultimate purpose is to take action to improve real-world problem situations (Checkland, 2000, p.s50).

SSM takes the view that every situation in which action is undertaken in the 'real world', is a human situation in which people are attempting or desiring to take purposeful action. Thus, in SSM 'purposeful action' is a key concept (Checkland, 2000). SSM claims that we cannot

effectively intervene in a problem situation, without first "struggling" with the problem space (Yearworth et al., 2010) and articulating and clarifying (called "declaring" in SSM) the purpose (and more specifically, the 'purposeful action' or "purposeful activity") that is being pursued (Checkland, 2000, p. s12). (The activity of making the purposes and worldviews explicit is called "declaring" in SSM. (The word "declare" is used and defined differently by Flores (2012, p. 15) who defines a "declaration" as an action and a speech act in which "a speaker declares a new world of possibilities for action in a community" just by the act of speaking.))

Ethnographic interpretive research conducted in 2010 by the Bristol Systems Centre identified the "purposefulness of the activity being undertaken" as being one of seven principles that are found in systems research projects that are grappling with complex real-world problems.

Given that this thesis is focused on the problem of designing action that is *purposeful* (i.e. action that is being done for a reason, to achieve a particular intention), SSM is useful because it clarifies that taking action is a human activity, and human beings need to know what purpose is being served by 'doing' something about the problem. Thus clarifying the common purpose is a critical step to take *before* any action is initiated. According to Sewchurran and Petkov (2007) the selection of what is considered "purposeful" is informed by each stakeholder's own "relevant personal conceptual system". Typically a group of divergent stakeholders will hold different ideas of what activities would be purposeful to pursue. SSM offers a useful mechanism for generating and structuring debate about the problem situation from many different stakeholder worldviews, in order to generate a compromise on what action(s) to take to improve things.

In understanding SSM, it is important to differentiate between the key '*activities*' in SSM (of which the development of 'models' is one activity); the '*elements*' of SSM; SSM as a 'methodology'; and SSM as a form of 'action research.' The issue of SSM as a 'methodology' and a form of 'action research' will be covered in Chapter Three. In the rest of this section, the key activities of SSM that Checkland (2000) argues have stood the test of time, are described, before highlighting the key elements that can be found in the LUMAS model in SSM.

The *key activities* in SSM are (1) to explore the problem situation, (2) to develop some models of purposeful activity relevant to the problem situation, (3) to use the models to help direct debate about the problem situation from many different worldviews, and only then (4) to take action in the situation (Checkland, 2000). (These steps are numbered as done here, in Figure 8).

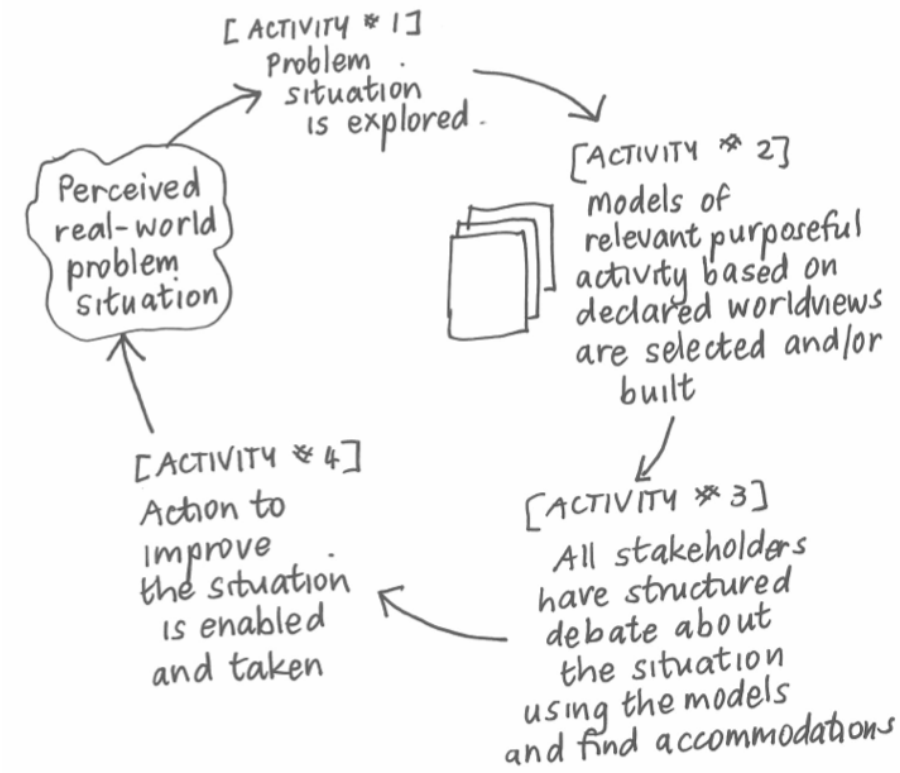

Figure 8 – Adapted from the inquiring/learning cycle of Soft Systems Methodology, with addition of researcher's own itemising of each of the four activities discussed (SOURCE: Checkland, 2000, p. s16)

The first key activity undertaken in SSM is to explore the problem situation (using sense-making tools such as Rich Picture Building which provides a picture to help stakeholders digest the complex problem) and Analysis One, Analysis Two and Analysis Three (which identify the problem owner and investigate the social and political forces at play in the situation.) Analysis One is a framework for examining the intervention itself. It helps put together a list of possible "problem owners" selected by "problem solver" as a way of sourcing ideas for "relevant systems" which could usefully be modeled. Checkland (2000, p. s23) says it is important to achieve a holistic grasp of the situation and asking the question: "Who could I/we take the problem owner to be?" is a helpful tool. Analysis Two developed out of the work of Vickers on 'appreciative systems' and was underpinned, philosophically by the work of Edmund Husserl. It is a framework for analyzing social processes that takes the view that social reality is not "out there" waiting to be investigated. Instead, it is continuously constructed and reconstructed byindividuals and groups (Checkland, 2000, p. s24). Analysis Three is a political analysis of the distribution of power in the social situation. It requires the tactful drawing out of views on what is required in

order to be powerful in the organization (or even the cluster) and to understand as deeply as possible how the culture works, what change might be feasible and what perceived difficulties change processes could create (Checkland, 2000, p. s26).

The second key activity in SSM is to build (many) models of purposeful activities to pursue. SSM recognises that there are likely to be many possible models in any given situation. This is because interpretations of purpose will always be multiple and differing, so there will, according to Checkland (2000, p. s14-15) always be a number of models in play, never simply one model purporting to describe 'what is the case'" (Checkland, 2000, p. s14-15).

"Models" in SSM are intellectual "devices" "whose role it is to help structure an exploration of the problem situation being addressed" (Checkland, 2000, p. s26). "Models" in SSM are also, according to Checkland (2000, p. s32) "*holons* for structuring debate". Checkland draws on Ken Wilber's development of the notion of "holon" which was first introduced into systems theory discussion by writer-philosopher Arthur Koestler in 1967 and later evolved by Wilber in his Integral Theory. The word "holon" is a combination of the Greek "holos" meaning whole, and the suffix "on" which (as proton or neutron) suggests a part or particle. The holon, then, is a part-whole. Koestler's view was that systems are hierarchically organised and holons are both parts and wholes because they are always parts of larger hierarchies and they always contain sub-hierarchies. As your point of focus moves up, down, and/or across the nodes of a hierarchical structure so your perception of what is a whole and what is a part will change. Thus simultaneously, looking down, a holon will be a self-contained whole to a subordinated part, and looking up a holon will be a dependent part of a larger whole. This makes a holon an arbitrary point of reference for interpreting reality and makes it possible to "transcend (and integrate) all the reductionisms of the partial views to boldly propose that the true locus of explanation does not reside in any particular level of reality and cannot be limited to any single domain of investigation." (Flood, 2010, p. 273) (Edwards). According to Sewchurran and Petkov (2007), the holon that is considered purposeful is informed by each stakeholder's own "relevant personal conceptual system".

In SSM, "models" are used as a way to inquire into (i.e. think about), question and compare the complexity and confusion in the problem situation. It is an intrinsic idea of SSM that, since there are many possible worldviews and many possible interpretations of a declared purpose, choices

have to be made and explicitly stated before modelling can begin. Choices to be made include questions such as: What world-view (perspective, or Weltanschauung) will the model for each purposeful human activity system be based upon? (e.g. a technical world-view, or a social or political world-view). Another question might be, "What purposeful human activity systems are likely to be the most relevant or insightful in exploring the situation?" (e.g. "a system to manage interactions with stakeholders") (Checkland, 2000). There are also key *elements* that are present in SSM models. An example of the elements of SSM's LUMAS model are provided in Table 2:

Table 2 - Table listing elements present in LUMAS model in SSM (SOURCE: Checkland, 2000)

Elements present in the LUMAS *(Learning for a User by a Methodology-informed Approach to a problem Situation)* **model in SSM**
• **User** (U) of Methodology • **Methodology** (M) (as a coherent set of principles that is formally described, and is the source of the approach adopted) • Real-world Problem **Situation** (S) • Actual **Approach** (A) that is adopted, which is tailored from the methodology considered appropriate to the situation, and used to improve the situation • **Learning** (L)

To help the User of the methodology (such as the facilitator) to keep their intellectual bearings in a situation that is constantly changing over time, the choice of what purposeful activity will be pursued is asserted upfront *before* modeling starts (Checkland, 2000). In practice, the modeling process is usually a structured process, and includes as wide a range of stakeholders as possible. By organizing the sense-making activity in this way, learning is also generated, making SSM a learning system as well.

The third key activity of SSM involves getting the stakeholders to debate the situation, using the models as a means to identify and discuss potential and culturally acceptable changes that could improve the situation. This structured discussion enables stakeholders to generate a (pragmatic) "seen by all" view of what the most desirable and feasible action is that could be taken. Generating this shared understanding makes it possible for stakeholders to arrive at compromises regarding what action can be taken to improve the situation. In effect, this requires finding versions of the situation that conflicting interests can live with. SSM calls this 'accommodations' (Checkland, 2000).

Finally, the fourth key activity of SSM is to take action in the situation to bring about improvement. In principle, this inquiry process is never ending (Checkland, 2010, p. s16). These four activities of SSM can be illustrated as follows:

SSM is useful because it recognizes the significance of 'relationship-maintaining' as an alternative to 'goal-seeking' (Mike Jackson, 2000). It recognizes that real-world complexity is "always a complexity of multiple interacting relationships" (Checkland, 2005) and as a result it provides sense-making devices, a rich inquiry process, a problem structuring process and a goal formulation process, that are designed to accommodate the complexity that interacting human relationships create. That said, a known limitation of SSM is that it offers very little guidance for participants on *how* to initiate and take action. It also takes it for granted that all stakeholders will participate, but this may not be the case (Sewchurran and Petkov, 2007).

The work of Flores (2012) can fill the gap here. His work offers a 'workflow' for conducting "conversations for action" that offers potential for inclusion as components that could achieve the outcome of purposeful action. His work also offers relevant ideas that assist with research question#3: "How do you generate the commitment that is necessary to unlock purposeful action …?".

Flores: Conversations for Action and Networks of Commitment frameworks

The questions, "How do we communicate for getting work done?" and "How do we coordinate human action and instill a culture of commitment in working relationships?" spurred academic, entrepreneur and politician, Fernando Flores, to develop the idea that we invent reality together in the commitments we make (in language) to one another when we speak (Flores, 2012, p. xiii). Over a period of thirty years, through research with other academics and practitioners (Denning et al., 2010; Flores, 2012; Solomon & Flores, 2001; Spinosa, Flores, & Dreyfus, 1997; Winograd & Flores, 1986) as well as in his own consulting practice with clients, Flores built up a body of work that laid the foundation for much of the current understanding about action workflow and commitment management theory (Flores, 2012, p. xi). He asserts that people get things done by sharing interpretations and making commitments to each other, which take care of their concerns. In the process, they are able to shift their expectations, possibilities and future direction (Flores, 2012, p. xiv).

Flores' work is informed by ideas drawn from philosophers Martin Heidegger and Hans-Georg Gadamer, as well as by Chilean biologists Humberto Maturana and Francisco Varela.

From Heidegger, Flores drew phenomenological notions that our "being-in-the-world" (which Heidegger called "Dasein") has a fundamental unity and it is impossible to separate a subjective and objective stance. Furthermore, language and meaning is fundamentally social and cannot be reduced to the meaning-giving activity of individual subjects (Winograd & Flores, 1986). Thinking ('cognition') is understood as 'concernful acting in the world' (or praxis). Winograd and Flores (1986, pp. 34-36) highlight in particular Heidegger's idea that we exist in a condition of "thrownness". In everyday life we find ourselves thrown in situations (such as facilitating stakeholder meetings or the workshops cited in the action research study in the case of this study), and we find that we cannot avoid acting and must flow with the situation as it unfolds. In addition, this thrownness means that we cannot predict what effect our actions will have on others. We also cannot step back and reflect on our actions and the actions of others during the facilitation itself because we do not have a stable representation of the unfolding situation and there is no way of determining afterwards what interpretation, if any, are right or wrong.

Gadamer believes that to exist is to use language and to be in language (Trombley, 2012, p. 246) and that all human understanding occurs in a historical context that affects the ontology (being) of the interpreter and the text (Trombley, 2012, p. 247). In other words, our being is always within the situation, and the meaning is contextual depending on the moment of interpretation and the "horizon" brought to it by the interpreter. The being of the interpreter is further determined by his historical-location in a particular culture, society and time (Winograd & Flores, 1986, p. 29). To Flores – "language is the essence of action" or more specifically, "action is coordination in language" (Flores, 2012, p. 5).

Maturana and Varela's work informed Flores' interest in biological being, as well as his rejection of the metaphor of information processing as the basis of cognition. He takes the view that information is not just passed from one mind to another (Winograd & Flores, 1986, p. 46). Language is not instrumental, it is expressive (Flores, 2012, p. xviii). The use of the word "distinctions" by Flores also stems from Maturana who deliberately chose to use terminology that seems puzzling because he recognised that well-established terminology carries within it a pre-understanding that is a trap for new understanding (Winograd & Flores, 1986, p. 40).

Maturana sees language as being a means of generating “distinctions” in a “consensual domain” (the latter being a pattern of mutual orienting behaviour that exists for a social community). A distinction for him is a statement made by an observer to another observer, and is grounded not in external reality but in the consensual domain shared by those observers (Winograd & Flores, 1986, p. 50). Flores highlights from Maturana that distinctions made in language presuppose some kind of social interaction in which the observer is engaged and subject-independent objective knowledge is not possible because we are biological beings who can never have knowledge about objective reality (Winograd & Flores, 1986, p. 50). Flores also highlights that interactions happen in domains. In the book Disclosing New Worlds (Spinosa et al., 1997), Maturana’s idea of “consensual domains” is developed further and the distinction of “disclosive spaces” is made. These are defined as “any organized set of practices for dealing with oneself, other people and things, that produces a relatively self-contained web of meanings” (Spinosa et al., 1997). The facilitation itself can be termed a “disclosive space”.

We can see the influence of Maturana and Heidegger in Flores’ (2012, pp. 97-101) argument that every person lives within a set of conversations that deal with certain unavoidable “domains of human concern” that cluster together under three “distinctions” that he makes about human beings – as linguistic beings, historical beings and selves (Flores, 2012, p. 98). Maturana and Varela make the distinction of “linguistic domains” which coordinate human actions through the domain of language (thus for example, the word ‘table’ coordinates human actions with respect to the actions people perform when they manipulate a ‘table’.). They state that: “we are constituted in language in a continuous becoming that we bring forth with others” (Maturana & Poerksen, 2004).

Maturana (quoted in Laszlo, 2012) says that an organisation can be understood as a network of conversations. This idea is also not lost on Checkland (2000, p.s45) who says SSM is like “a more organized, more holistic form of what we do when we engage in conversation.” The actual structure of ‘conversations for action’ that Flores developed, originated in the speech acts theory of John Austen and particularly John Searle (Flores, 2012, p. x). Searle (2011) asserts that speaking a language requires the performance of “speech acts”, such as asking questions, giving commands, making promises and making statements. He sees making speech acts as being equivalent to taking action and argues that “a theory of language is part of a theory of action,

simply because speaking is a rule-governed form of behavior" (Searle, 2011, p. 17). Searle formalized the structure of context-appropriate conditions that are associated with what are known as "illocutionary" speech acts, i.e. utterances with verbs such as "I promise …", "I declare …" (whether said in this way or in a more simple statement such as "I'll be there" instead of "I promise") (Searle, 2011).

Searle identified five categories of illocutionary speech acts. These are: "assertives" which commit the speaker to the truth of an expressed proposition; "directives" which attempt to get the hearer to do something; "commissives" which commit the speaker to some future course of action; "expressives" which express a psychological state of affairs that may include apologizing and praising; and "declarations" which link the content of the speech act to reality (by, for example, declaring completion or satisfaction with work completed) (Winograd & Flores, 1986, pp. 58-59). Winograd & Flores (1986) absorbed this thinking and incorporated these speech acts within a basic action workflow structure for a 'conversation for action', that consists of four separate speech acts: a request or offer; a promise or acceptance; a declaration of completion; and a declaration of satisfaction (Flores, 2012, p. 5).

This structure was later further developed by Flores into a model for a "Basic Action Workflow". This model has been adopted in particular in sales contexts, particularly in the software development sector (Fisher, 2009). The Basic Action Workflow, which is illustrated in Figure 9, indicates that for something to be called a "conversation for action" it requires both a speaker (such as a facilitator or a "customer") and a hearer (such as a participant or a "performer"). Furthermore, conversations for action are circular not linear in nature and they have conditions that must be satisfied in order to address underlying concerns of the participants. Commitment, according to Flores, happens in the making of the speech acts (in this case, of request, offer, acceptance and declaration). The Basic Action Workflow divides conversations for action into four stages: Preparation, Negotiation, Performance and Acceptance. In the diagram, each stage ends with an image of a straight line that denotes a transition point in the phase of the conversation (e.g. the performance phase), that should ideally have a "by when" time associated with it. Thereafter the conversation may end or there may be another "move". Thus for example, a 'report of completion' may not meet the customer's conditions of satisfaction and he will not

accept the work, requiring the performer to go back to performance stage to address these concerns as requested.

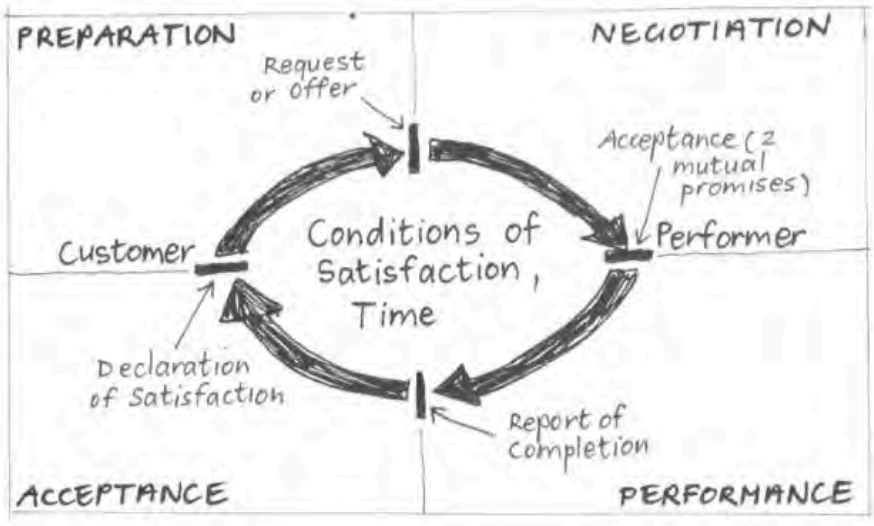

Figure 9 - Basic Action Workflow diagram (SOURCE: Flores, 2012, p.33)

Borrowing from Searle, Flores stresses that "speech acts create commitment" and "to be human is to be the kind of being that generates commitments through speaking and listening" (Winograd & Flores, 1986, p. 76). In other words, when you speak and listen in a specific type of conversation called a "conversation for action", you make commitments and you invent possibilities (Flores, 2012, p. 14).

Meaning arises in listening to the commitment expressed in the speech acts (Winograd & Flores, 1986, p. 68). Flores says:

> *"Language isn't something we use to talk about action; it's how we create our common future. People don't have conversations for action to specify some object that must be produced or procedure that must be followed. They have them to keep themselves oriented toward a common future they're all committed to … and anywhere that people are coordinating their actions, in whatever language, you'll find they're doing so by making offers and requests, making and fulfilling promises, and declaring satisfaction." (Flores, 2012, p. 15)*

In practice, conversations do not always lead to action, and interventions in pluralistic environments can be beset by problems with trust and mood. Solomon and Flores (2001) propose that, in pluralistic environments, facilitators must develop the emotional skill of building 'authentic trust'. Key is also to recognise that it is the relationship itself that must be the focus of

attention (Denning et al., 2010; Flores, 2012). Trust-building requires "self-scrutiny, caring about the long-term relationship and not just the outcome, negotiation and mutual understanding, and a willingness to make and stand by one's commitments" (Solomon & Flores, 2001, p. 95). There are four separate concerns that are always relevant to assessments of trust in partnerships. These are "sincerity" (making promises you intend to fulfill and are able and competent to carry out); "competence" (being capable of performance in some domain); "reliability" (being capable of reliable and timely performance); and "engagement" (being committed to the future well-being of the other stakeholders and the possibilities for collaboration) (Flores, 2012, p. 70-71).

Another reason for failure to generate action is the role that mood plays. According to Denning (2012), moods are not the same as emotions, because they can be shared with others. He defines mood as "general pervasive states of interpretation about the world" and says that positive moods are energizing and negative moods are de-energising. Furthermore, moods act as "filters" for seeing the world. Denning et al. (2010) note that "dramatic mood shifts" are "constant threats" in pluralistic teams that operate within IT environments marked by complex challenges (such as divergent views on possible actions to take, distributed decision making, deadline stress and information overload) (Denning et al., 2010, p. 31). In these environments, obstacles can show up as feelings, moods, attitudes or prejudices, which must be navigated in order to collaborate, innovate and "coordinate action efficiently and effectively" (Flores, 2012, p. xi). Coordinating action among divergent stakeholders requires the development of sensitivities and soft skills in universal values and practices, according to Denning et al (2010, p. 31). These include articulating visions that others embrace and commit to; making and fulfilling commitments; sharing performance assessments real time and on the spot (including disclosures of mood); observing one's own history and how it interacts with the histories of others; and dynamically aligning and blending the intentions and actions of team members (using the "moves" of conversations for action and possibility) with those of others (Flores, 2012; Denning et al, 2010).

Good moods 'open' conversations for possibility and for action, and bad moods 'close' possibilities for action, according to Flores (2012). However, moods can be shifted if people can be helped to recognize that moods are not something from the past that will perpetuate into the future. Instead, moods are "an assessment about the future" and since the future has not yet happened, they can be shifted (Flores, 2012, p. 62). Flores says moods can be shifted by first

becoming aware of your feelings; then articulating what the mood is telling you about what you are believing about the future; and then "grounding" the assessment by finding specific observable actions and events to support it. Flores says that once a person realizes that a negative assessment (e.g. a bad mood like resignation, resentment or fear) is ungrounded, it opens the possibility that they can resolve to shift out of the mood and once again be open to a new possibility for action (Flores, 2012). However, they must then be given the free choice to choose to change their mood (or not).

The value of Flores' work lies in the fact that it draws attention to the importance of the very act of conversation (of speaking and listening) as being a mechanism that generates "moves," such as the making of requests and the giving and receiving of commitments, that are essential to action (Flores, 2012, p. 39). By making sure that all "moves" must have a "by when" (i.e. a time by when they will be done), and that the activities that are agreed on address underlying concerns that the participants share, it is possible to ensure that participants make commitments to take action, and keep these commitments. If moves such as "declaring completion" or "declaring satisfaction" with the actions that have been taken, are missing, this leads to communication breakdowns that can lead to wasted time and undermine trust. Following the "Basic Action Workflow" process helps ensure that action happens. Flores (2012) describes a 'conversation for possibility' as a conversation you have with yourself and others in which you declare things like the projects you are willing to undertake, and in which you produce the domains in which you can have conversations for action. In other words, once possibilities for action have been imagined, every stakeholder engagement or intervention in a cluster problem, if structured as a conversation for action, should (in theory) generate the commitments needed to get to action.

Argyris and Schön (1991) also highlight the important role of particular types of purposeful conversation in generating commitment, when they note that if people do not share valid information with one another, they are not able to make free and informed choices, and as a result they will not generate high internal commitment to any new behavior they attempt.

It is important to note, finally, that something that was also useful in Flores & Winograd's (1986) work, for this study, is the way in which they have consciously drawn ideas and theories from different philosophical paradigms (such as those of Heidegger, Maturana and Varela, and Searle).

This ‘approach’ was also used in this study, which also has a personal philosophical paradigm that informed the methodology (This is discussed in Chapter Three.)

A weakness with Flores’ action workflow model is that it assumes that human beings seek efficiency in their communications and are rational. It also requires that everyone on the team is trained how to use the method and its ‘distinctions’. It gives scant recognition to human emotions or feelings, except in the guise of “moods” (which are expressly said to be different from emotions). This lack of appreciation of “feelings” is also evident in SSM. Nonetheless, in the researcher’s own experience, feelings (such as ‘disharmony’) were very present in her own efforts to design purposeful action (hence the inclusion of question #4: “How do you prevent conversations to design purposeful action from being undermined by defensive behaviours and bad moods?” and question #5: “Why is the process of facilitating interventions to design purposeful action leading to so much personal and interpersonal disharmony and breakdown?” The work of Argyris (1982) appeared to shed some light on why negative behavior and defensive behaviours might be triggered in stakeholder engagements and this is discussed in the next section.

Argyris: Model I and II and defensive routines

Checkland points out that the ultimate concern of SSM is “being human” (Checkland, 2000, p. s45). Senge (1990) highlights that human beings are susceptible to making causal inferences that assume that there is a direct linear cause-effect chain between what they intend to do and what they actually do (Argyris calls this “design causality” (1993, p. 58)). Furthermore, as both Senge and Checkland note, human beings have a common lack of awareness of their own behavior in the world. Checkland points out that:

> *“Everyday life develops in all of us trusted intellectual structures which to us seem good enough to make sense of our experiences, and in general we are reluctant to abandon or modify them even when new experience implies that they are shaky. Even professional researchers … show the same tendency to distort perceptions of the world rather than change the mental structures we use to give us our bearings.” (Checkland, 2000, pp. s18-19):*

Checkland and Flores’ contributions do not provide a way to get beneath the surface of what people say, and uncover the ‘unconscious’ programmes that cause people to perpetuate certain

behaviour in the system, and then change this behaviour. As noted before, Checkland does not believe it is possible to "change" things, only to improve them, but Argyris does propose that behavior can change. However, Argyris and Schön (1974) developed a conceptual framework and method of reflection-in-action for explaining features of interpersonal action that occur in social systems such as organisations. They tackled the problem of how human beings develop an ability to take deliberate action and simultaneously reflect on this action and learn from it (Argyris & Schön, 1974, pp. 3-4). Their 'theory of action' perspective provides distinctions for explaining or predicting a person's deliberate behavior by attributing theories of action to them (Argyris & Schön, 1974, p. 6). It is fundamentally informed by a belief that:

> *"Understanding how we diagnose and construct our experience, take action, and monitor our behavior while simultaneously achieving our goals is crucial to understanding and enhancing effectiveness" (Argyris & Schön, 1974, p. xxxii).*

Argyris takes the view that human beings "design" their actions (1993, p. 58). A key activity in the designing and implementing of action is that of "productive reasoning" (Argyris, 1993, p. 55). Thinking productively requires making inferences explicit by basing them on hard observable data (in other words, it requires that conclusions be made on the basis of evidence and reasoning – hence the use of the word "inference" instead of the word "assumption"). An "inference" is a process of reasoning in which a conclusion is obtained in some way from certain facts or premises (The Collins Concise Dictionary, 1986, p. 575). An "assumption" is the act of taking something for granted (The Collins Concise Dictionary, 1986, p. 63). The Oxford Dictionary defines "assumption" as "a thing that is accepted as true or as certain to happen, without proof" and it defines "inference" as "a conclusion reached on the basis of evidence and reasoning" (Oxford Dictionary, n.d). In Critical Thinking there is a big difference between the two words. According to the Foundation for Critical Thinking (n.d), "an inference is a step of the mind, an intellectual act by which one concludes that something is true in light of something else's being true, or seeming to be true". By comparison, "an assumption is something we take for granted or presuppose. Usually it is something we previously learned and do not question. It is part of our system of beliefs. We assume our beliefs to be true and use them to interpret the world about us."

One can argue that if divergent stakeholders cannot reason through their assumptions so that they can become inferences, they will not be able to design and implement actions that are effective in

simultaneously achieving goals and encouraging change at the level of the "governing variables" underlying their "theory-in-use" (Argyris, 1993, p. 61).

A "theory-in-use" is the underlying "programme" that people use (usually without being aware of this fact), to design and maintain control over their actions. Typically this differs from what their "espoused theory" is, i.e. what they articulate regarding how they design their actions in real-world situations (Argyris, 1982). Argyris (1982) found that it is very common in Western business to find that people are programmed in what he calls "Model I" theory-in-use. Since people are usually blind to the counterproductive features of their actions when operating under Model I, they need other people to highlight these for them. A "Model I" theory-in-use is governed by four underlying variables, namely (1) achieve the purpose or goal as the actor defines it; (2) win, do not lose; (3) suppress negative feelings; and (4) emphasize rationality. When people are operating according to Model I, they tend to create defensive group dynamics, that reduce the sharing of valid information and reduce free choice. As such, Model I is a mechanism for attempting to exert control over the environment (Argyris, 1982, p. 86). Argyris (1982, p. 163) explains how it is possible for people to come to believe that their underlying Model I "theory-in-use" about how the world works, is the reality of how the world works, by highlighting that the brain's filtering process for dealing with vast quantities of information, gives it a "built in factory pre-set" that means that human beings tend to assume that their (customised, constructed) understanding of the world is the reality itself.

Argyris (1993) provides case evidence from government, industry and academic contexts, that shows that counter-productive and hidden defensive processes lie dormant in individuals and in organisations until situations of potential threat or embarrassment activate them (Argyris, 1993, p. 45). He calls these processes "defensive routines" and defines them as "any action, policy, or practice that prevents organizational participants from experiencing embarrassment or threat, and at the same time prevents them from discovering the causes of the embarrassment or threat." (Argyris, 1993, p. 55). In situations where a potential danger or risk of shame is detected, people will reason defensively ("defensive reasoning") and make inferences that are implicit and based on "soft" data (Argyris, 1993). The defensive routine operates to "bypass and cover-up" the uncomfortable problem, and take reactive action that excuses and maintains the bypass and coverup, in so doing ensuring that the self and others remain blindly unaware of what they have

done to avoid the threat (Argyris, 1993, p. 44). This creates situations where issues become "undiscussable" and behavior can arise that disables effective action to achieve goals. As a result, people become over-protected from learning from their unproductive behavior, so it perpetuates (Argyris, 1993, p. 53). Change can only occur when mismatches between intentions and actual consequences can be noticed and corrected (Argyris, 1993, p. 49). Kline (2010) also points to this problem. She calls it 'denial' and argues that until you face what you have been denying your mind is not freed up to think clearly. She identifies three stages of denial which collectively operate to ensure that "people quickly reconstruct reality and then offer as true what was never true in the first place". The cycle is "Ignore this. Then distort it. Then rewrite it" (Kline, 2010, p. 72).

Argyris and Schön (1974) offer "Model II" as a way to overcome defensive reactions. The governing variables of Model II behaviour are to share valid information, make free and informed choices and generate internal commitment to the choices you make. The result is behaviour that is minimally defensive, learning that is "double loop" (ie effects change at the level of the underlying governing variables) and group norms that are oriented to trust, individuality and willingness to confront difficult issues (Argyris & Schön, 1974). By sharing rather than controlling information, participants can bring problems out into the open. This creates a tension to resolve problems, that can lead to double loop learning. Learning is "single loop" when the mismatch between intentions and consequences only changes a person's behavior; and "double loop" when it changes the underlying "master programme" (ie "theory-in-use") that leads to the behavior (Argyris, 1993, p. 49).

Argyris illustrates single-loop and double-loop learning as follows:

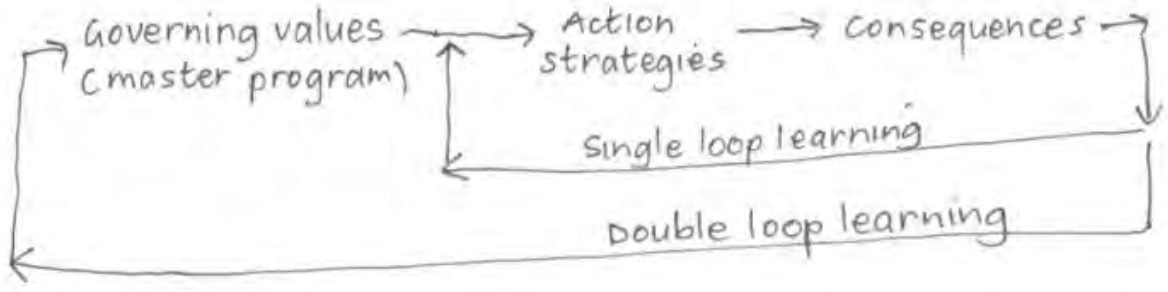

Figure 10 - Single-loop and double-loop learning (SOURCE: Argyris, 1993, p. 50)

In single loop learning we are acting like a thermostat that corrects error (such as, the room is too hot or too cold) without questioning its programme (why am I set at 22 degrees?). If the thermostat did question its setting or why it was measuring heat at all, it would need to re-examine its underlying programme. This questioning of the underlying programme would be called double-loop learning. Single-loop problems are easier to solve and to monitor, and tend to be preferred. However, this type of learning comes at the expense of unquestioning acceptance of a situation. The consequence is that "we may produce something for today but lose control of tomorrow." (Argyris, 1982, p. xii).

In the researcher's experience in cluster development, an underlying "master programme" that was perpetuating an inability to address the deeper underlying skills challenges of the regional software industry was identified. Whilst global multinationals were working with government to introduce skills programmes, they were only funding programmes that trained people in their own skills. In a multistakeholder round table facilitated by the researcher between government, industry, academia and a multinational software provider in 2012, we identified that an underlying master programme of "multinational software companies must make money" was operating. (This aligns with Model I behaviour). This belief operated to undermine their "espoused" theory that they were making a positive contribution to the real underlying industry need for software developers that are able to adapt – ie able to learn new software languages. When the global multinational's skills manager was confronted on this by a government official it erupted into a major conflict that led to all kinds of politics as a result (and highlighted the reality of defensive routines undermining projects with divergent stakeholders.) The end result was a breakdown in the project.

Kline (2010) also refers to the problem of valid information not being shared, and like Argyris she finds that 'denial' ('defence mechanisms') and 'limiting assumptions' (inferences based on theory-in-use) constricts people's ability to think about problems productively. However, instead of focusing on teaching people to *change* their defensive behaviour by exposing the underlying theory-in-use that causes it (as Argyris does), Kline (1999, 2010) focuses on finding ways to help people and teams to generate their own best thinking. Her work is thus relevant in exploring research question#2: "How do you ensure that the quality of thinking about the problem situation is productive?". In reflecting on question#5: "Why is the process … leading to so much personal

and interpersonal disharmony and breakdown?", the thought arose that it would be helpful if there was a method for preventing defensive mechanisms from being triggered in the first place, even in cases where the stakeholders were divergent and the problem was complex. The work of Kline (1999, 2010) seemed to offer a feasible model (and less confrontational approach) for answering both of these questions.

Kline: Creating the right context for good thinking

In her 1999 book, Kline uses the phrase: "In the presence of the question, the mind thinks again" (Kline, 1999, p. 159). Subsequently, she revised this statement to assert instead that "the mind works best in the presence of a question," (Kline, 2010, p. 98). She argues that it is questions that drive inquiry forward. In her own decades of research and practice, she has had a single-minded focus on the following related questions: *How far can people go in their thinking before they need my thinking? How much further than that can they go for themselves? And how much further than that? And then, how much further even than that?* (Klein, 2010, pp. 98-99). She argues that facilitators (as well as coaches, managers and leaders) should stop seeking to intervene with advice (a practice Raelin (2006) also recommends) and rather focus on creating the right kind of "Thinking Environment" within which people can think about a problem - because the mind(s) that invented the question are usually best at solving them.

According to Kline (2010, p. 30), a Thinking Environment is a framework with "ten components", that provides ways in which people can 'be' with one another. (All ten do not have to be used simultaneously.) She says:

> *"[The Ten Components] generate good thinking in people. They generate open-mindedness with each other. They create safety and trust. And thus they elicit people's authentic selves. They dignify people. They help people to be at ease around others so that breakthrough thinking can flow between them" (Kline, 2010, p. 30).*

The ten components are listening without interruption (attention); treating one another as thinking equals (equality); maintaining a calm, slow pace because people don't think well when rushed (ease); praise, in a 5:1 positive to negative feedback ratio (appreciation); encouragement (rather than competition); allowing feelings; offering valid and complete information (which is also a key requirement of Model II behaviour); allowing for diversity in people and ideas; using place in a way that shows that people matter; and offering 'Incisive Questions' when thinking

gets blocked (Kline, 2010). Kline (2010) illustrates the Thinking Environment and its "Ten Components" as follows:

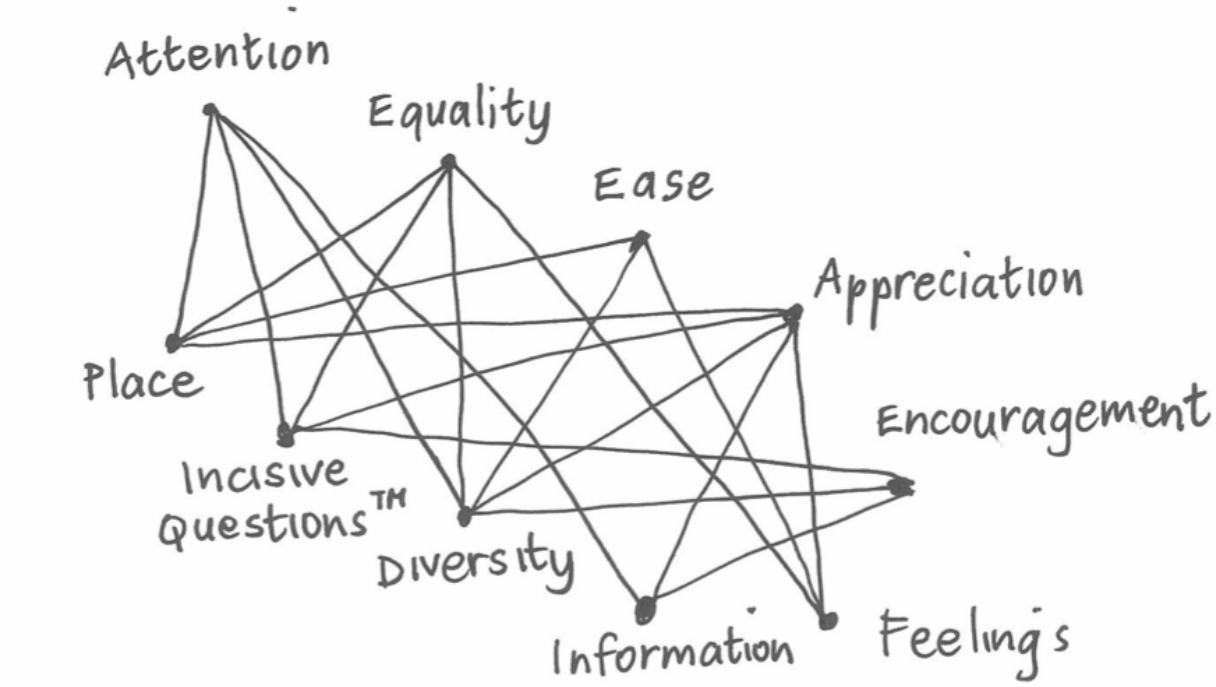

Figure 11 – Adapted from Kline's Ten Components of a Thinking Environment diagram (SOURCE: Kline, 2010, p.22)

Feelings are included as a component because "benign ones help us think better" (Kline, 2010, p. 80). Kline highlights that "fear constricts everything, especially thinking" and says that feelings need to be mastered. We need "to build an intelligent relationship with our feelings that allows us to know when to act on them and when not to, when to stop right there and release them, and when to wait" (Kline, 2010, p. 78). Kline (2010, p. 79) says further that:

> *"In a meeting, when your rage rises, notice the fog coming in. Summon interest, compassion, logic, ease and a personal commitment to every mind in that room … and to the finest possible outcome from the discussion."*

Kline (1999) argues that if a speaker experiences that the listener will listen without interruption, judgement or loss of attention, and maintain soft eye contact, he will be able to get this own mind to think about the problem. What the facilitator (or listener) needs to do is help the Thinker overcome 'untrue limiting assumptions' that block the ability of their mind to think for itself. An

'untrue limiting assumption' is a belief (usually about the self or the world) that lies between the thinker and their goal (Kline, 1999, p. 166; Kline, 2010, p. 138). When the Thinker replaces the untrue limiting assumption with a new freeing assumption, their mind can access ideas that were not reachable before. Getting to the "untrue" limiting assumption requires "information, logic and positive philosophical choice" (Kline, 2010, p. 126). (A positive philosophical choice requires making the assumption that human beings are inherently good.) Kline takes the view that:

> *"The human mind thinks for itself best when making a positive philosophical choice about the self and about how life works … If you choose a negative view, the Thinker will be unable to think further" (Kline, 1999, p. 169).*

Similarly, Flores (2012) speaks about the need to shift the mood from negative to positive, in order to get people to see possibility for new action. He recommends asking the question, "What is the assessment about the future implied by my mood?" and "Is this assessment grounded?" at times when bad moods affect team performance (Flores, 2012, p. 63). Kline (1999, 2010) would say that phrasing these as questions opens the mind to thinking differently.

The differences between inferences and assumptions were mentioned earlier. Whilst Argyris refers to inferences, Kline uses the word "assumption". However, it may be argued that since she is arguing for the need to think about the assumption, she may in fact be working with inferences. For Kline, it is very important not to phase a question about an assumption as: "what are you assuming about X that is stopping you" because the untrue assumption causes the true one to stop you, according to Kline (2010). The relationship is not derivative, it is causal. You want to be asking the Thinker what they are assuming that causes the assumption to stop them. Using the word "about" stops the question from finding the untrue assumption that causes the true one to stop them (Kline calls this a transition question) (Kline, 2010, p. 139).

Once the untrue limiting assumption has been found, the listener can ask the Thinker an "Incisive question." [7] An 'Incisive Question' is defined as a question (that is typically the last of a series of

[7] This idea of questioning assumptions is very similar to that of Katie's "The Work" model. Katie asks four questions of an assumption: Is it true? Can you absolutely know that it's true? How do you react when you believe that thought? Who would you be without the thought? (Katie, 2002, p. 15). She then asks the inquirer to "turnaround" the assumption to themselves, to the other and to its opposite (Katie, 2002, p. 77).

questions in a questioning process) that "turns around a limiting assumption and opens the mind to new possibilities" (Kline, 1999, p.175). The sequence of questions will depend on what type of goals the Thinker may have. The questions may flow as follows:

- What are you assuming that is most stopping you from moving forward?
- Do you think that assumption is true?
- What is true and liberating instead?
- If you knew (insert 'liberating assumption'), how would you go forward?

Overall, Kline notes that the key value of the Thinking Environment is that it replaces "control, urgency and certainty" (which are key components of a Model I world it could be argued) with "Respect, Ease and Interest". She says the qualities of "respect, ease and interest" are required in order to get people to do great thinking "in a group that might before have been a bear pit, complete with dominance by a few, silence among others, and depleting, disappointing discussion all round" (Kline, 2010, p. 240).

With regards to group facilitation specifically, Kline says facilitating is "a fine act of engineering" that requires qualities like courage, grace, a sense of humour and flair (Kline, 2010, p. 230). In Kline's method, as a facilitator creating a Thinking Environment, your job is to run the meeting so that it generates good thinking, without formally telling the group how to do it. Table 3 lists Kline's key facilitator skills required to run a Thinking Environment with a group:

Table 3 – Activities for facilitating a meeting using a Thinking Environment (SOURCE: Kline, 2010, p. 231)

Activities suggested for facilitating a meeting or session using the Thinking Environment
1. Tell people good thinking is the aim, that everyone's thinking matters equally and that the session will be structured to reflect those principles
2. Present the agenda items as questions
3. Do an opening "success" round (highlighting positives)
4. Do agenda item Rounds (always starting with a question)
5. Do Open Discussion without interruption
6. Get people thinking about assumptions
7. Ask Incisive Questions
8. Get people thinking in pairs
9. Get people thinking in small groups, with Rounds
10. Get people after small groups to share their freshest thinking, not report on what was said (Capture ideas in people's own words)
11. Have people appreciate each other's good qualities
12. End with a success Round

In the interpretive phase of this study, the researcher began testing elements of Kline's 'Thinking Environment' model to see if this might be possible. Early experiments seemed so promising that Kline's framework was included as a component in both cycles of Action Research that were conducted (with results that are discussed in Chapter Four and Five). A limitation of Kline however, is that it works best with groups of less than 15 people and it does not have a mechanism for dealing with defensive behaviour if it does arise.

Finally, Kline (2010) frames her method as offering a "way of being in the world." Whilst she doesn't specifically discuss what she means by "being", her work focuses attention on the skills and qualities required in a facilitator in order to create the right environment for thinking about a problem situation. Raelin (2006) is much more specific about the importance of "Being" as a skill required by facilitators, and this contribution will now be explained.

Raelin: Facilitation as reflective practice

Earlier it was noted that whilst the literature on cluster development implies that facilitation skills are required in cluster coordinators, there is scant literature on *how* to facilitate. Raelin (2006, 2012) reviews academic and popular literature on facilitation and finds that what distinguishes facilitation from meeting management or group therapy is that 'facilitation' focuses on *process* rather than on content. The key role of a facilitator is to stay as neutral as possible, keep conversations productive, and make it easy for a group to 'do' its work. He asserts that:

> *"As a servant to the group, the facilitator has one goal—to help the group achieve its purpose by assisting the participants in having a constructive dialogue, as free as possible from internal dynamics that may block productive discourse" (Raelin, 2006, p. 83).*

In other words, Raelin puts facilitation squarely in the domain of the design of a process for achieving common purpose. Facilitation requires paying attention to the design of conditions suitable for ensuring that the process and the conversations are productive. He highlights that facilitators must be able to model behaviours in the group such as openness, tolerance of ambiguity, awareness, non-judgement, empathy, unconditional positive regard, vulnerability and encouragement (Raelin, 2006, p. 86). Raelin (2006) calls these "andragogical skills". Alexander Kapp first used the term "andragogy" in 1833 to describe elements of Plato's education theory. It is derived etymologically from andr- (meaning 'man) and agogos (meaning 'leading'). The term

is often used in adult education (Infed.org). Some other andragogical facilitator skills discussed in the literature, according to Raelin (2006) include listening attentively, creating an environment that is collaborative and open, unearthing diverse perspectives, addressing conflict sensitively, examining underlying assumptions and revealing one's own inferences, noticing inconsistencies between beliefs and actions, giving and receiving feedback non-defensively and encouraging and allowing feelings. (These all align with Kline's Thinking Environment.)

Furthermore, facilitators working in practice need to be able to minimize group direction (except in early stages where it may be needed) to allow and enable group members to "learn how to learn" and to solve their own problems (Raelin, 2006, p. 86). As Raelin notes (2006, p. 87) "part of the craft of facilitation in praxis is knowing when to offer counsel to help the group overcome obstacles and when to hold back to allow group members to assume leadership roles critical to the team's internal development". A facilitator who wishes to learn from and reflect on what is experienced in practice, should also be able to use intervention strategies (such as prescriptive, informative, confronting, cathartic, catalytic or support interventions), in an eclectic way, either alone in conversation (Raelin, 2006).

Facilitators also need to know how and when to engage in activities to understand, intervene, review or integrate (Raelin, 2006, p. 88) and when to most appropriately use the skills of critical facilitation (in which group members are encouraged to challenge and later review the statements they and others make and the assumptions they are relying on to make these assumptions (Raelin, 2006, p. 89)). Here he highlights the action science application of critical praxis by Argyris and notes that this method of reflection-in-action can be useful for probing the deeper causal factors that lead people to behave in the way they do and help teams engage in double-loop learning (Raelin, 2006).

Raelin, together with Leaver, articulate what they call the five advanced facilitator skills of "Speaking, Disclosing, Testing, Probing and Being", that are required in reflective practice (Raelin, 2006, p. 100). Raelin (2002) views the skill of 'being' as central in creating an atmosphere that is conducive for reflection in a group or team setting. As such, it occupies the dimension called the "frame mode" in his model.

Raelin (2002) says:

> *"Framing refers to how we think about a situation, more specifically, how we select, name, and organise facts to tell a story to ourselves about what is going on and what to do in a particular situation … At times we make personal contributions to the group and focus attention on our selves [the 'individual mode']. At other times, we extend and dedicate attention to others [the 'collective mode']" (Raelin, 2002, p. 72).*

The skill of being requires that the facilitator be present and vulnerable, model non-defensive behavior, and experience and describe what is happening in the situation without attributing meaning to what is going on (Raelin, 2006, pp. 91-92). In 'being', the objective is to open up to experience and to the interpersonal environment in a curious, inquisitive and present way. 'Being' requires that we "engage in such practices as suspending certainty, externalising our thoughts, and exploring the tension of the opposites" (Raelin, 2002, p. 70). Martin (2007) is very focused on deciphering how successful leaders think when they have to make difficult decisions. He says that human beings are born with an 'opposable mind' that they can use to hold two conflicting ideas in constructive tension, and then use that tension to think their way through to a new and better solution. What is important is not to make either-or tradeoffs but rather to think in terms of "and" instead of "either-or" and integrate the best of both solutions to find a third solution.Senge (1990) recognises the importance of mastering an ability to hold the "creative tension" that exists (in the gap between vision and reality, for example). Senge notes specifically that it is vital to differentiate between negative emotional tension (caused by anxiety) and creative tension, which is a positive, creative force that comes into existence when we acknowledge that there is a gap between what we want and the reality that exists, and try to close it (Senge, 1990, p. 151).

It is interesting to note that Raelin points to Buddhist insight meditation, and notes that it defines 'being' as "mindfulness, which represents knowing what is arising in the moment without losing track of the knower" (Raelin, 2002, p. 71). 'Being mindful' is key to enabling being present and being vulnerable because it requires that you monitor your physical state during the process of facilitation and use your body to help you (as facilitator) detect issues that need to be addressed.

There is an extensive body of literature on mindfulness, but a few key points on mindfulness can be highlighted here. In drawing together features of mindfulness common across a number of conceptualizations (e.g. Bishop et al., 2004; Brown, Ryan and Creswell, 2007; Kabat-Zinn, 2005), Dane (2011, p. 1000) defined mindfulness as "a state of consciousness in which attention is focused on present-moment phenomena occurring both externally and internally." According

to Mrazek et al (2012), mindfulness is operationalized in a variety of ways, with ongoing disagreement as to the most privileged and useful definition of this construct (Grossman & Van Dam, 2011). One perspective defines mindfulness as sustained nondistraction (Brown & Ryan, 2003; Wallace & Shapiro, 2006; Dreyfus, 2011), whereas multifactor understandings of mindfulness highlight not only awareness of present experience but also an orientation toward one's experiences that can be characterized by curiosity, openness, and acceptance (Bishop et al., 2004; Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006).

Dane and Brummel (2013b) state that "workplace mindfulness is a cognitive construct concerned with the degree to which one's attention tends to be focused on a wide breadth of events unfolding in one's work context." According to Dane and Brummel (2013), whilst mindfulness is often conceptualized as a state, several studies have revealed disposition-based differences in mindfulness across individuals (e.g. Baer et al., 2006; Brown and Ryan, 2003; Lau et al., 2006). These studies indicate that, all things being equal, some individuals tend to be more mindful than others. In this sense, mindfulness is analogous to positive and negative affect, which can be conceptualized and evaluated as both a state and a trait (Watson et al., 1988). Amid this disagreement, there is nonetheless consensus that sustained attentiveness represents a fundamental element (if not a complete characterization) of mindfulness.

There is recognition in the literature that mindfulness assists in facilitating emotional self-regulation (Atkins and Parker, 2012; Glomb et al., 2011), which is something that can be an issue when there is disagreement in teams. Research indicates that mindfulness leads people to cope with challenging or stressful situations proactively and adaptively (e.g. Shapiro et al., 2007; Weinstein et al., 2009). Mindfulness also leads people to cope with challenging or stressful situations proactively and adaptively (e.g. Shapiro et al., 2007; Weinstein et al., 2009). The literature therefore suggests that mindfulness can modulate emotional reactivity in stressful environments. Recent research has also linked the mindfulness of leaders to the performance of followers (Reb et al., 2012).

Returning to facilitation, Raelin and Leaver's model is diagrammatically represented in Figure 12.

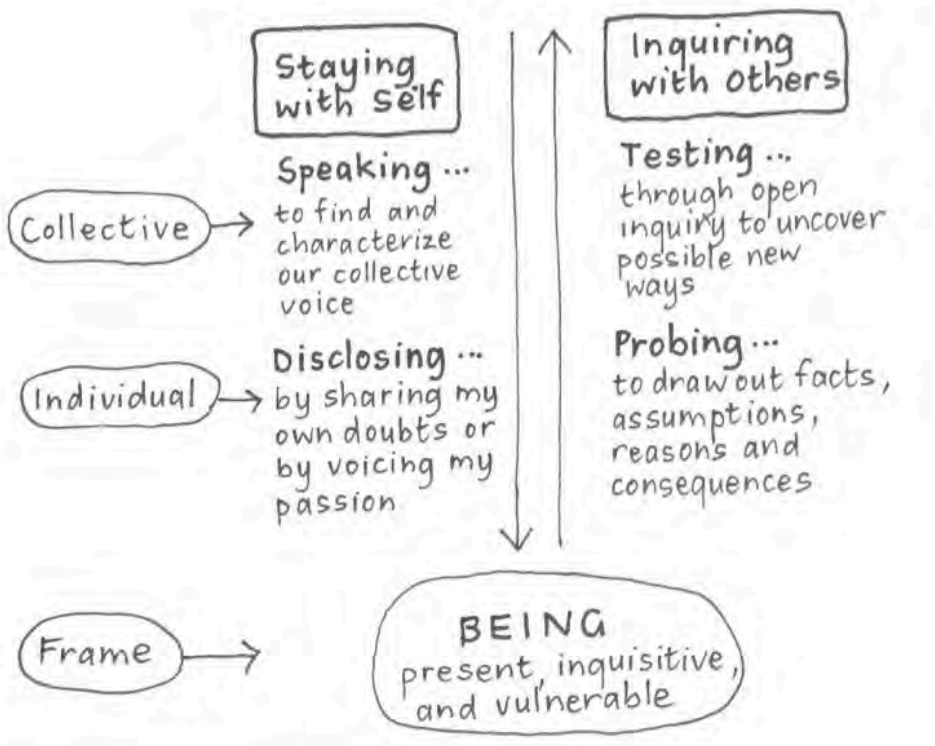

Figure 12 - Raelin and Leaver's model of the Five Facilitator Skills in Advancing Praxis (SOURCE: Raelin, 2006)

The skill of "Speaking" requires that the facilitator articulate the collective voice, to unearth the meanings that are evolving out of the group process, and to bring out uncertainties and limiting assumptions. (One could argue that SSM does this too, as does Kline's Thinking Sessions). The skill of 'Disclosing' entails the ability to stay present with yourself whilst simultaneously articulating your feelings about what has transpired (Raelin, 2006, p. 93). The skill of 'Testing' involves enabling open-ended inquiry by the team as a whole to uncover possible new ways of thinking and behaving. This skill happens on a collective level. The final skill, of 'Probing', happens on an individual level and involves the facilitator directly asking team members questions to draw out facts, assumptions, reasons, and consequences (Raelin, 2006, p. 93).

Raelin's model could provide a useful framework for incorporating a number of other concepts and models including SSM, the Thinking Environment, and Senge's ideas. Like Kline (1999, 2010), Raelin (2002) also highlights the problem of a lack of time to think and the importance of being. What is missing in Raelin however, is Kline's Ten Components of a Thinking Environment, which would support (through encouragement, appreciation, and ease in particular) the process of individuals in the group staying present with themselves. It does

however seem important that all the stakeholders be able to operate within the individual, collective and 'being' modes. Participants who are not facilitating, are also individuals that Disclose and Probe in inquiring into problem situations, so these are not skills for facilitators only. Senge's Causal Loop Modelling and Kline's Thinking Session also offer tools that can assist with the process of Inquiring with Others.

Kline and Raelin's models thus stimulated a consideration of the qualities of 'being' that are required when facilitating an intervention, and led to the incorporation of these into the framework of ideas for this study.

Summary

This chapter discussed theoretical concepts drawn from systems thinking and systems dynamics (Senge), soft systems methodology (Checkland), commitment management theory (Flores), the 'theory of action' perspective (Argyris), the Thinking Environment (Kline), and facilitation as reflective practice (Raelin).

In the selection of theoretical concepts to use in order to develop the framework of ideas and combine them into one 'construction', the researcher chose theories that resonated with her personally. There is theoretical support for the notion of theories being included because they resonate with the theorist. Walsham (2006) says that selection of theory is essentially subjective. He notes that in many articles he reviewed, the researchers do not say why they chose certain theories. His supposition is that the answer "lies in the researchers' own experiences, background and interests. They chose a particular theory because it 'spoke' to them" (Walsham, 2006, p. 325). Walsham (2006) notes further that there can be "considerable diversity in the theories chosen" and sometimes different theories are selected at different times during the research process. Thus theories can be used "in lighter or tighter ways both of which have their merits" (Walsham, 2006, pp. 324-325).

As explained in Chapter One, five questions were posed as mechanisms to inquire into the persistent and relevant problem of "how to design purposeful action among divergent stakeholders," and these questions also informed (and were informed by) the selection of theorists. The questions (stated in summary), key contributors and the concept or model highlighted, are summarised in Table 4.

Table 4 - Summary of research questions, theorists and key concepts selected

#	Question (Research area and themes)	Key relevant contributor	Concept, idea or model selected (Framework of Ideas)
1	What structural "design" components should be included in an intervention to achieve the outcome of "*purposeful* action"?	Senge	Systems thinking - Systems dynamics (Reinforcing & balancing loops, causal loop modelling)
		Checkland	'Purposeful activity models'
		Flores, Winograd	Basic Action Workflow Conversations for action
		Argyris & Schön	'Theory of action' perspective
2	As a facilitator, how do you ensure that the quality of thinking about complex problem situations is productive (i.e. opens up possibilities for action)	Senge	Causal loop modelling
		Checkland	Systemic process of inquiry using models of purposeful activity to structure debate
		Argyris & Schön	Productive reasoning
		Kline	Thinking Environment, testing assumptions and asking Incisive Questions
		Raelin	Facilitator skills of speaking, testing, disclosing and probing.
3	How do you generate the commitment that is necessary to unlock purposeful action, especially when the problem situation is 'wicked' and the problem owner is ambiguous and unclear?	Checkland	Sense-making generates purpose
		Flores, Winograd, Solomon	Commitments made in speech acts in conversations for action; Trust
		Argyris & Schön	Model II generates internal commitment to free choice made when valid information is shared
4	How do you prevent conversations to design purposeful action from being undermined by defensive behaviours and bad moods?	Checkland	Analyses One, Two and Three – understand the history of the situation
		Argyris & Schön	Defensive routines; Reveal dilemmas, uncover 'Theory- in-use'; encourage double-loop learning and a shift to 'Model II'
		Flores	Managing mood "as an assessment about the future"
5	Why is the process of facilitating interventions to design purposeful action leading to so much personal and interpersonal disharmony and breakdown?	Flores, Denning	'Mood shifts'
		Argyris & Schön	'Defensive routines,' 'Model I'
		Kline	'Control, urgency, certainty';'Denial'
		Raelin	Facilitator skill of 'being', mindfulness

During the auto-ethnographic interpretive phase of this study, the researcher selected aspects from theories that resonated with her, and used them to help shed light on practical 'real-world' problems she was encountering in practice. Over time the idea emerged that it may be possible to combine these into a personal framework for intervening that might help her find ways to avoid or address disabling disharmonies and breakdowns, and thus (she believed) help her become more effective as a cluster coordinator and as a leader.

All the theories and models that have been highlighted seem to have a real potential to contribute to the persistent and relevant problem of "how to design purposeful action among divergent stakeholders," such as those present in IT clusters. However, they need to be organised into an intervention framework that is appropriate for environments with complex problems and divergent stakeholders, and then tested in a real-world environment. This led to Phase Two of the Research Methodology, which is explained in Chapter Three.

For the purposes of clarity, the researcher's final complete iteration at the end of the interpretive research stage, is drawn in colour in Figure 15 at the end of this chapter to show each theorist's separate contribution clearly. This diagram shows how the researcher drew out relevant aspects of the contributions of Senge, Checkland, Flores, Argyris, Kline, and Raelin, and combined them to form a single conceptual construction encompassing a repetoire of ideas selected from these contributions. As such, it illustrates the structural design components that are postulated as possibly providing an answer to question#1: "What structural 'design' components should be included in an intervention to achieve the outcome of 'purposeful action'?"

Attention is expressly drawn to the fact that the foundational contribution on the researcher's conceptual construction is SSM's LUMAS *model*, which is used as one of the concepts within a bigger set of ideas that together comprise the researcher's conceptual "framework of ideas". 'Additions' into the basic LUMAS model were added iteratively during the interpretive phase of the research, to produce the construction in Figure 15.

It is really important for the reader to note at this stage, that SSM has evolved in such a way that it is "virtually inseparable" from Action Research (AR) as a way of conducting an inquiry into human activities, such as 'taking action together' (Checkland, 2000, p. s41; Checkland & Holwell, 1998; Flood, 2010, p. 272). This point is emphasized because Action Research forms one of two research paradigms (i.e. methodologies) that are used in this study and the possibility

exists that the reader may wonder why there is SSM in the study's "framework of ideas" ("F") and there is also SSM in the research methodology used (of Action Research). As is explained in Chapter Three, SSM can be used as *both* a methodology *and* as a method.

In the diagrams in Figure 13, the picture on the left is an example of a cycle of action research conducted in a SSM way, and the picture on the right is SSM's LUMAS *model*. Both diagrams are discussed extensively in Chapter Three and detail is not provided now. The reader is just requested to note at this stage that the LUMAS model (on the right) forms part of the researcher's "framework of ideas" because it is a *concept* that is useful because it provides a structure to follow when 'designing purposeful action among divergent stakeholders'. (For clarity note that it can be confusing making sense of Checkland's use of "A" and "S" in the diagrams below. The real world problem situation is noted as "A" in the diagram on the left and "S" in the diagram on the right. In the right-hand-side diagram "A" refers to 'actual approach adopted' not the problem situation, which is specified as "S". "F" refers to 'framework of ideas'; "M" refers to 'methodology'; "L" refers to 'learning' and "U" refers to 'user of the methodology').

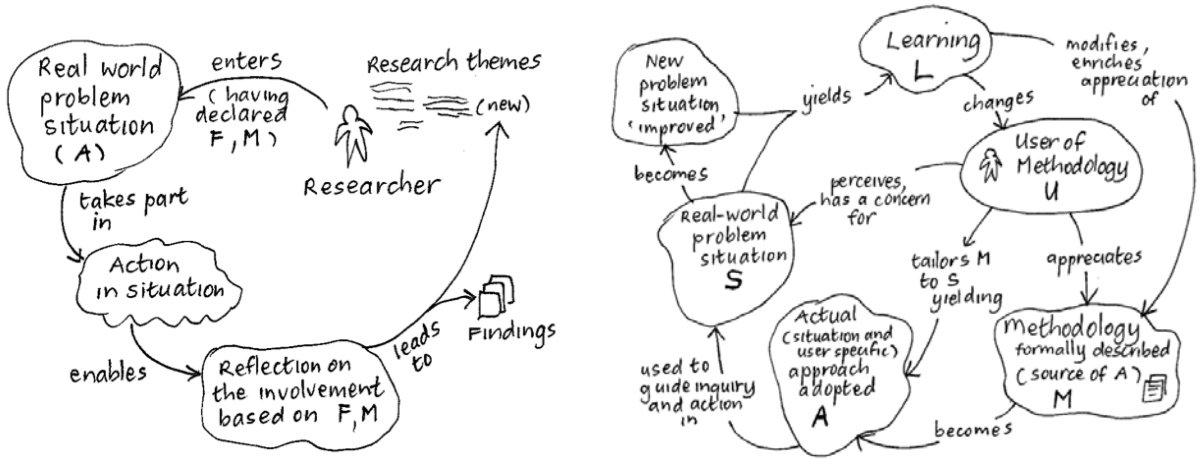

Figure 13 - Illustration of a cycle of action research as it is done in SSM (left) (Checkland & Holwell, 1998, p. 15) and SSM's LUMAS model (Checkland, 2000, p. s37)

This chapter has presented a series of concepts, ideas and models from six contributors (Senge, Checkland, Flores, Argyris, Kline and Raelin) that were combined into a conceptual construction that could provide a set of ideas that could be used as lenses against which to explore the study's research problem.

The diagram in Figure 14 summarises the ideas and concepts that emerged inductively through this process. It serves to illustrate the (arbitrarily declared) 'end point' that the researcher's thinking was at immediately before the Action Research phase of the study began.

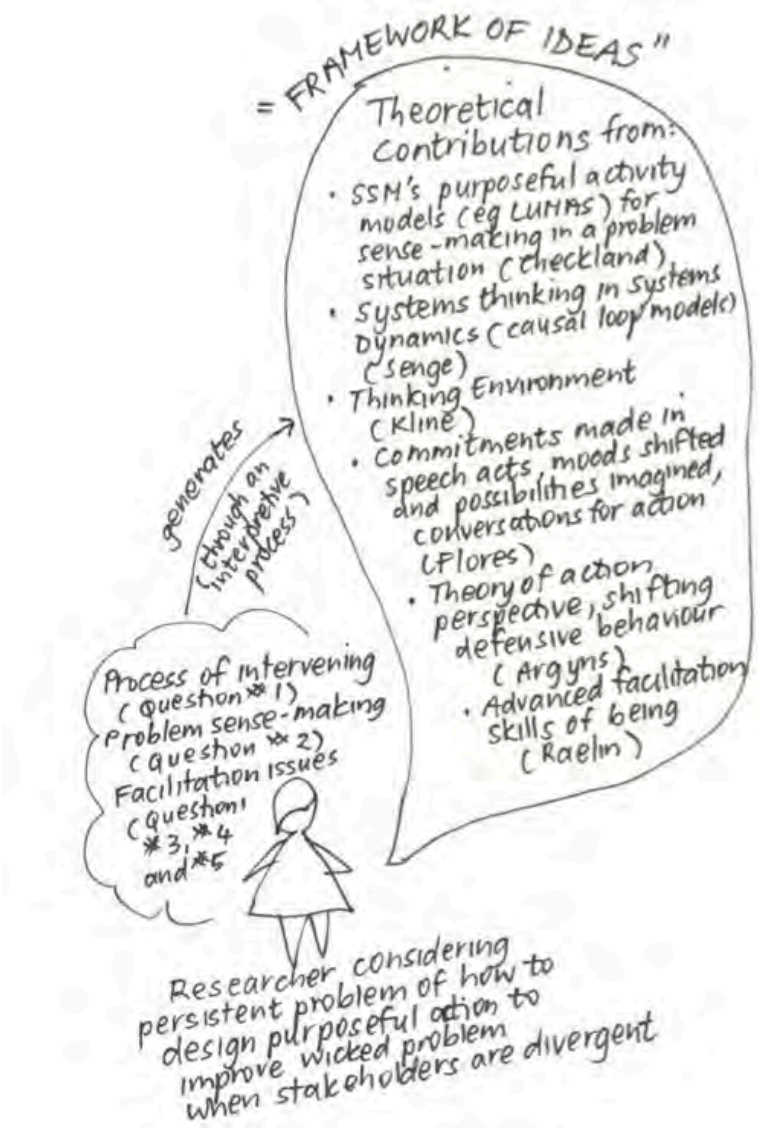

Figure 14 - Researcher's own construction of the theoretical lenses considered most relevant before the Action Research Phase of the study began

Finally, Figure 15 represents the researcher's own attempt to pull all these ideas together into a single conceptual framework, including the ideas from all the theorists selected, that will form the "framework of ideas" that is declared before the action research phase of the study is conducted, as is required when conducting action research in an SSM way.

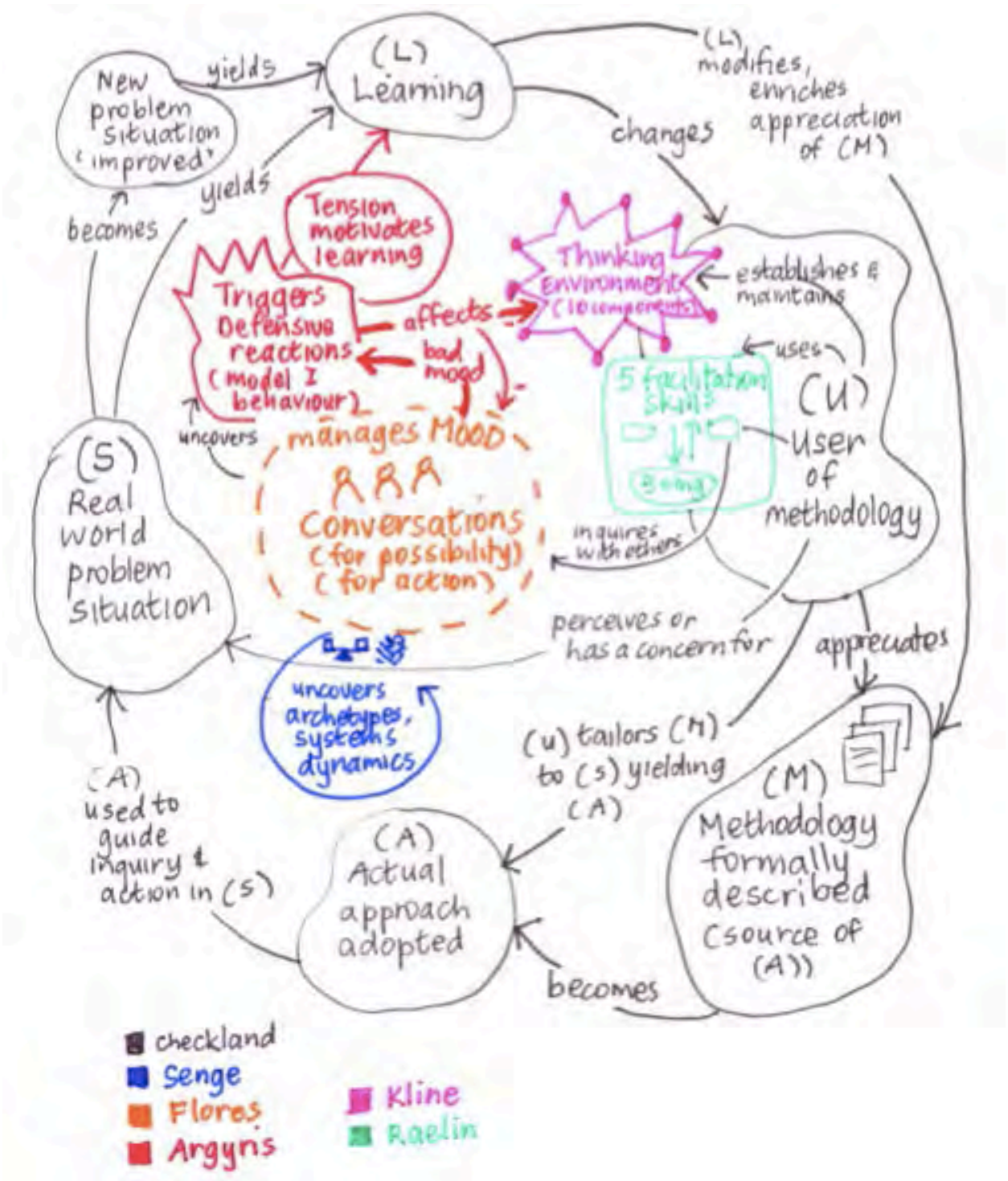

Figure 15 - Researcher's own construction of a Framework of Ideas for facilitating interventions to design purposeful action among divergent stakeholders, framed as an answer to the study's Question#1, "What structural 'design' components should be included in an intervention to achieve the outcome of 'purposeful action'?"

After the research was conducted, nascent thoughts related to the notion that what was being developed was a ‘personal knowledge system’ were explored further using the work of Austen (2010) and Laszlo (2012) and led to quite significant changes and developments in the researcher’s thinking, and a new version of this “conceptual framework”, that is illustrated and discussed in Chapter Four and in Chapter Five.

It is now necessary to explain the study’s philosophical stance, interpretive and action research paradigms and the methodologies that were adopted.

Chapter 3: Methodology

Introduction

This research set out to address a need for a way to design purposeful action, generate shared understanding among participants who hold diverse perspectives; and deal with soft issues, such as commitment, trust and defensiveness, that arise when facilitating conversations to enable diverging groups of stakeholders to take action together.

This chapter explains the methodology that is adopted for this study. It begins by foregrounding the philosophical paradigm that underlies the theory and methodology selected, as well as the intellectual choices that the researcher makes throughout this study. Thereafter the key elements required in methodology use are explained and it is noted that the study chose to incorporate two research paradigms – interpretive (ethnographic) and action research, within a single methodology. The interpretive research phase is described first. This stage of the study was conducted primarily between July 2012 and November 2013, and was an auto-ethnographic phase in which the researcher documented and interpreted her personal experiences in the 'field' of sector development and intra-organisational initiatives. The assertion is made that the three elements required in order to claim to have conducted ethnographic research, namely use of ethnographic data gathering methods, a theoretical grounding and a philosophical stance (as per Forsythe, 1999) are present in this study.

Thereafter, a second research phase, which was conducted between December 2013 and May 2014, is covered. The differences between methodology and method in SSM is clarified, and action research as a methodology is explained, before declaring the study's overall Framework of Ideas (F) and Methodology (M) (as is required in order to be able to claim to be conducting action research in an SSM way).

Finally, it is noted that a decision was made that the usefulness of the theoretical ideas that emerged inductively in Phase One, should be tried out in practice and two iteractive cycles of action research would be conducted in a real-world situation. In Chapter Four, this 'real world' intervention and action research phase is presented as a single case, together with research propositions relevant to the proposed framework of ideas, and findings.

Philosophical paradigm informing the study's methodology

The researcher came into the thesis with a set of personal interests that shaped the direction of the study. These intellectual preoccuptions were with 'being-in-the-world' (and how one's being is affected by challenges such as conflict in work environments); and 'doing-in-the-world' (and how to inspire possibility and enable diverse groups of people to undertake action together to effect positive social change).

As a result, this research was framed within the domains of both 'being' and 'doing' and as such incorporated philosophical notions about what it means to be human and interact with others, as well as pragmatic influences that appreciate the need to balance theory and practice when dealing with 'wicked problems' in the domain of concern of work. As was noted in Chapter Two, this approach of incorporating philosophical ideas when developing a framework for generating action, is something that Flores and Winograd (1986) also adopted in their seminal work, Computers and Cognition.

The study is located in the context of problematic situations of concern. In exploring the notion that "problems" are wicked, Coyne (2005)'s revisiting of Rittel & Weber's 1973 essay on the "wicked problem" was found to be useful. Coyne refers to Rittel & Weber's argument against Herbert Simon's "science of design" that takes empirical science, logic and mathematics as its models of rationality. Rittel and Weber argue that any professional task or design process cannot be adequately explained by reference to rules, protocols and goal setting. Instead the skill of the professional is better demonstrated in "how" they frame the problem that needs to be addressed. Problem setting is viewed as a fraught process for which there is "no authoritative set of rules, criteria or methods" (Coyne, 2005).

Coyne (2005) highlights five philosophical-theoretical "second generation analytical methods" that propose solutions to the "problem of rationality" within the context of "wicked" or "enigmatic" problems that "the professional" (which he does not define) has to grapple with in practice (Coyne, 2005, p. 7). These are the pragmatic, phenomenological, dual knowledge, narrative, and radical professionalism responses. The latter three approaches will briefly be discussed first.

The dual-knowledge response is to highlight the theory-practice dichotomy and argue that rationality has to be balanced with emotions and feelings and it is important to explore "concrete integrations of knowledge that combine theory with practice for new productive purposes" (Coyne quoting Buchanan in Coyne (2005)). Whilst the value of this approach was recognised at the end of the study, it was not appreciated before the research began.

There are also aspects of the narrative approach in the theorists selected, but it did not have a substantial philosophical influence. Nonetheless, it is appreciated that conversation is considered to be a mode of action within the narrative model response to the 'problem of rationality' (Coyne, 2005). Flores' takes the view, for example, that "conversation is the essence of action" (Flores, 2012, p. 5) and both Checkland and Argyris appreciate that action happens in conversation. Coyne (2005) asserts that professional expertise involves a trade in narratives, and the problem-solving process is characterised substantially by talk: "Professionals are caught up in fields of negotiation and dialogue within which they are charged with formulating an intervention, the reception of which may be met with resistance, promoting further dialogue" (Coyne, 2005, p.10).

Giles Dileuze and Felix Guattari's theorizing on "radical professionalism and the rhizome" departs from systems thinking by proposing that "there is no meaning greater than the parts, no higher or deeper level of meaning" (Coyne, 2005, p. 11). Dileuze and Guattari posit the concept of the 'plateau' which is "any multiplicity connected to other multiplicities by superficial underground stems in such a way as to form or extend a rhizome." In this perspective, "the radical professional doesn't necessarily dispense with the structures, but peers into the fissures and fingers through the crumbs" (Coyne, 1995, p. 12). In a way, reflecting on the disharmonies and breakdowns is a type of "looking into the cracks" – in myself and in the interventions, but this was only recognised at the end of the study.

Of these, aspects of pragmatic and phenomenological philosophical paradigms were present in the researchers' philosophical paradigm at the start of the study. Coyne (2005) argues that the pragmatic response is to "embrace" the elements that make problems 'wicked' (such as the challenges of the uniqueness of wicked problems, difficulties of testing in context, enganglement of connections between aspects of the problem, and "the interplay of diverse value systems" (Coyne, 2005, p. 7)). The pragmatic method was inaugurated by John Dewey who said "we are beings who judge and evaluate", and therefore we are usually unable to prevent our preferences,

dislikes, wants and desires, from being projected into the situations we find ourselves in. Thus, professional rationality can't exist without including 'how we feel' about these circumstances (Coyne, 2005, p.8). Pragmatism, as a philosophical school, starts from the position that the purpose of thinking is not to provide us with a true picture of the world, but rather to help us act more effectively within the world. If we take a pragmatic perspective, we would not ask, "Is this the way things are?" but rather, "What are the practical implications of adopting this perspective?" Dewey said that problems arise because we are trying to make sense of the challenges of living in a changing world using the traditions which we have inherited. He also said that we can only think when we are confronted with problems (a notion that Kline has embraced). Thus, for Dewey, philosophy is about actively engaging in practical problem solving (Buckingham et al., 2011).

The influence of pragmatism is evident in the contributions that were selected for this study. Checkland, Senge, Argyris, Kline, Flores and Raelin are all actively involved in practical problem solving in real-world contexts. Thus, for example, Kline's "Thinking Sessions" and "Incisive Questions" are used extensively in the domain of coaching and is practically engaged in getting people to think through questions or problems for themselves. Argyris (1996) appreciates Dewey's inquiry-based view of organisational learning as a combination of mental reasoning and action. Like Dewey, Argyris (1996) views inquiry as a social process that is conditioned by taken-for-granted assumptions, and Checkland (2000) also sees practitioners as inquirers working in a socially constructed world.

In this study, in addition to a paradigm related to 'doing-in-the-world', there is also an ontological perspective (ie. an interest in issues of 'being') that is influenced by existential, phenomenological, hermeneutic philosophical paradigms. By contrast with the pragmatic paradigm, the phenomenological response is to move away from a rationalistic, systems-oriented frame into the realm of interpretation and meaning-making as developed in the twentieth century by Martin Heidegger and Hans-Georg Gadamer (Trombley, 2012).

Phenomenology is a philosophical approach that looks at phenomena (ie. how things appear) by examining our experience of them from within our own life, from our own 'insider's position'. For the phenomenologist, philosophy has always asked questions about 'Being' and we need to look at "the being for whom Being is an issue", which is us. We ourselves are the entities to be

analysed, according to Heidegger, and ontological questions we could ponder include: "What is it like to exist" and "What does it mean to say that something exists?" (Buckingham et al., 2011, p. 253). For Heidegger, if we want to explore questions of being, we have to start with ourselves, by looking at what it means for us to exist (Buckingham et al., 2011). The problem for Heidegger is one of questioning what it is about the human Being that compels us to think in a causal way when everything else about our experience rejects such 'technological thinking' (Coyne, 2005, p. 9). Phenomenology (from a Heideggerian perspective) requires us to stick with the things that appear in experience, and learn to see them in such a way that they show up *as they really are*. (For Heidegger, 'phenomenon' in its most basic sense means 'that which shows itself from itself' (Wrathall, 2005, p. 9)).

One of Heidegger's innovative insights was that in our human existence, we have a 'being-in-the-world' that is grounded in our always already finding ourselves in the world in a particular way (Wrathall, 2005, pp. 10, 37). We are not a mind that can exist without a world as Descartes argued. We are an entity ('Dasein', which translates to 'being-there' (Lemay & Pitts, 1996)) that exists in and is actively engaged in a 'world' (or as Heidegger puts it, a "there" that is a meaningfully structured situation in which to act and exist (Wrathall, 2005, p. 37)). This world (that includes a particular culture and social environment) already exists and we always find ourselves 'thrown' into or 'delivered over' to circumstances beyond our control. Thus we are essentially defined by the way we exist in a world (Wrathall, 2005, p. 31). Heidegger calls this "thrown-ness" (Lemay & Pitts, 1996; Wrathall, 2005, p. 35). This world offers a range of possibilities and tools for achieving our possibilities and also establishes styles and norms of behaviour and gives us a domain in which we can act (Wrathall, 2005, p. 15). In taking this idea further, Flores (2012) distinguishes 13 'domains of concern' that are unavoidable for human beings as Linguistic Beings, Historical Beings and Selves. These domains of concern are body, family, play, sociability, work, education, career, money, membership, world, dignity, situation and spirituality (Flores, 2012, pp. 97-111). It is within these domains that familiar day-to-day concerns and breakdowns can happen, and, according to Flores, our possibilities for taking and observing action are generated by "the structure of concerns that we are" (Flores, 2012, p. 111). (In this study, the domain was 'work' and the 'concerns' were taking purposeful action.) In this study, Kline, Flores and Raelin all address issues of being in their work.

In the literature review in Chapter Two, it is evident that the theories selected include aspects of the pragmatic and phenomenological responses to wicked problems encountered by professionals in practice. Given this two-philosophy approach, it was believed that the study would require a research methodology that is 'open' to multiple evolving perspectives, and can encompass both 'doing' and 'being' (ie taking action and reflecting on our own 'being-there' as the process of acting unfolds). This led to the creation of a two-phase methodology, that combined interpretive and action research approaches. This methodology will now be laid out.

Research methodology

As has been noted, the study is located within the domain of pragmatic and phenomenological philsophical interests. On commencing the study, it was felt that two research paradigms would be of value to the study. First, there needed to be an auto-ethnographic interpretive study, during which theoretical concepts can be brought to light inductively, and then used to build an (emergent) theoretical framework. (The ideas and concepts that were adopted were discussed and the framework illustrated at the end of Chapter Two.) Thereafter, a second phase would be required in order to test the theoretical ideas in a 'real world' case study. After consideration, this two-phase approach was decided on.

The first phase of the study (July 2012 – November 2013) followed an interpretive methodology in which personal experiences in the 'field' of sector development and intra-organisational initiatives were documented and interpreted. Theoretical ideas that emerged inductively in Phase One were applied in practice in Phase Two (which ran between December 2013 and May 2014), in which two cycles of action research in a single case study, were undertaken following the process of Action Research as outlined by Checkland and Holwell (1998).

Both phases included the three interacting elements that Checkland (2000) asserts are always present and interlinked in *methodology*[8] use. The first component is a 'User of Methodology' who is knowledgeable about a methodology and, in noticing a problem situation, decides to enter the situation using the methodology, and attempts to then take action to improve the situation.

[8] Checkland defines "methodology" as referring to both 'science of method' and 'a body of methods used in a particular activity' (Checkland, 2000, p. s36). This is explored more on page 73.

The second element is a 'Methodology' that must be made explicit (ie documented and written down). Finally, the third element is the problem 'Situation' itself (Checkland, 2000).

It is important to note that analysis of what happens in a real-world (or case study) situation, carried out by an outsider, needs to embrace all three elements *as well as* the interactions between them, according to Checkland (2000). In addition, the user can convert the methodology (as a set of principles) into a specific approach or 'method' that is felt to be appropriate for *their* specific situation *at a particular moment in history* (Checkland, 2000, p. s36).

The set of three interacting elements that are always present in methodology use are graphically illustrated in Figure 16:

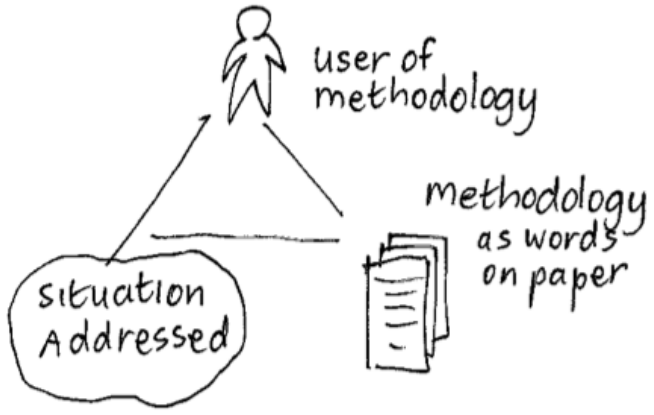

Figure 16 - Three interacting elements always present in methodology use (SOURCE: Checkland, 2000, p.s37)

In the action research conducted in Phase Two of this study, the methodology of SSM is incorporated as part of the process of Action Research (which approach is well accepted within SSM) and SSM is itself one of a set of methods that is part of a collection methods that is included in the study's framework of ideas. This is explained in more detail when discussing Phase Two. First however, the ethnographic methodology of Phase One is described.

Phase One: Interpretive methodology

Phase One comprised an interpretive study that drew on the researcher's personal experience of leading a regional cluster towards achievement of a possibility of adding new IT skills and more IT jobs into a regional economy. In consciously adopting a pragmatic-ontological philosophical

paradigm in this research (as has been described), there is an acknowledgement that, when intervening as a facilitator into a situation of concern that matters to you (be it inside an organisation, a cluster, or even in your personal life), your own 'being-in-the-world' is 'thrown' into a set of situations that already exist and are beyond your control. These situations can cause moods (or "disposedness" to use the Heideggerian term) to arise that come from a way of relating your self to the things and people around you.

The work of philosopher Martin Heidegger on "What is called thinking?" is very helpful in verbalising, philosophically, the inductive process that occurred in Phase One. Heidegger (1976, p. 169) says: "Thinking itself is a way" and we walk the way, and move forward along the way, by questioning thoughtfully. It is through the movement of questioning that we advance and in the process, "the way that is cleared does not remain behind, but is built into the next step, and is projected forward from it" (Heidegger, 1976, p. 170). This is exactly what in fact happened in the development of this study's literature review as well as the action experiments. Thoughtful questioning and reflecting about the "in the moment" situations that were being experienced helped keep the thinking moving, and informed further thinking.

The journey was therefore, not one that can be traced "from somewhere to somewhere like a well-worn rut" (Heidegger, 1976, p. 169). Although there was movement, and there were steps, they were not linear cause-effect processes, but rather circular, sometimes apparently random, movements. It started where it started and each step either moved the action forward or resulted in a dead-end that required thoughtful questioning and attention. Heidegger (1976, p. 169) has an insightful way of explaining this way of moving forward. He comments as follows:

> *"In order to get underway, we do have to set out. This is meant in a double sense: for one thing, we have to open ourselves to the emerging prospect and direction of the way itself; and then, we must get on the way, that is, must take the steps by which alone the way becomes a way" (Heidegger, 1976, p. 169).*

In so doing, we take a position somewhere along the road, and from this vantage point, "have a conversation about whether, and how, earlier and later stretches of the way may be different." (Heidegger, 1976, p. 169). For me, these conversations were with myself, with my colleagues and supervisors, and with the stakeholders I was engaged with through the process of intervening in the complex problem situations I was attempting to address. The process of documenting and

reflecting on the experiences generated insights into the "breakdowns" in the project(s) and the impact of these disharmonious experiences on my own being-in-the-world (to use the Heideggerian term). Each reflection was incorporated into further thinking about the problem situation as well as the evolving framework, and had the effect of creating a resonance towards certain types of theorists and theoretical frameworks, which helped project the thinking forward. As was highlighted in Chapter Two, the work of Walsham (2006) provides theoretical support for the acceptability of selecting concepts based on what resonates with you personally.

The methodology of Phase One was ethnography. As a research process, ethnography involves using three elements in combination. These elements are constructed by the research into a diagram in Figure 17 and described in more detail thereafter:

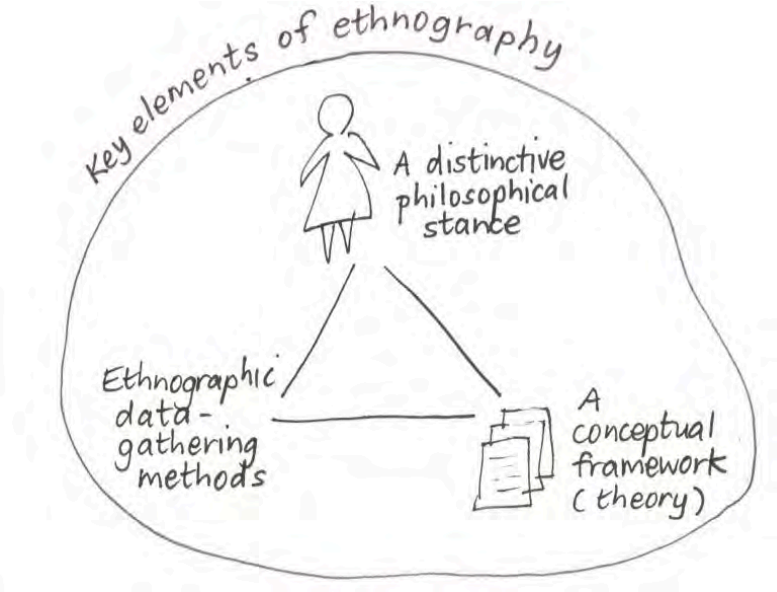

Figure 17 - Researcher's own construction of the three interacting elements required in using ethnography as a research process (derived from Forysthe, 1999 and drawn a la Checkland (2000)).

One component requires using ethnographic data gathering methods, such as interviewing, observing, and analysing documentary sources. This step makes it possible to discern "patterns of thought and practice" and explore inter-relationships between them (Forsythe, 1999, p. 128). In choosing a style of involvement in doing fieldwork for an interpretive research study, Walsham (2006) says that it is important to realise that fieldwork is a spectrum of grey, not a black or white thing. He notes too that "interpretative does not equal qualitative" (Walsham, 1990, p. 320) and in interpretive research you can pull in data from quantitative studies, press

reports, internal documents like business plans, direct observation, etc. giving you a range of material beyond qualitative interviews. He also notes that "shared meanings are a form of intersubjectivity rather than objectivity" (Walsham, 1990, p. 320). Schultze (2000), in her discussion of ethnography, highlights that it is pragmatic to combine both subjectivity and objectivity in ethnographic research, as these are interlinked and intertwined, and both are necessary.

A second aspect required in order to claim to be using ethnography as a research method, is to ground your observations in theory (Forsythe, 1999). This was done consistently throughout the study. A number of theoretical contributions were selected. These were compared with one another and combined to provide a possible design for intervening in pluralistic problem situations, which was illustrated at the end of Chapter Two.

The third element of ethnography involves applying the theory in the "context of a distinctive philosophical stance" (Forsyste, 1999, p. 129). As has been noted, this study has it own philosophical paradigm. The theories selected find resonance in pragmatic and phenomenological philosophical responses to perplexing (non-rational) problems encountered by professionals in practice.

According to Forsythe (1999, p. 131) whilst is might seem to outsiders that ethnographers just talk to people and gather anecdotal evidence, ethnography is a technical field and experts in the field take seriously issues of methodological appropriateness, procedure and validity and believe that the systematic method and epistemological discipline of ethnography (developed since the 1970s) should be followed rigorously if the outcome of good research is desired (Forsythe, 1999, p. 131). Schultze (2000, p.26) says she tacked "back and forth between a data-driven, inductive interpretation and a theory-driven deductive fitting of data". She says "my fieldnotes constituted the 'evidence' I had from the field and they showed that I had followed the 'rules' of the ethnographic method." A similar claim is made here. This study's data making methods, consisted of qualitative sources such as one-on-one interviews and stakeholder round-table discussions, meeting minutes, internal documents, workshop preparation notes, notes from team feedback sessions, causal loop diagrams and other artefacts, including tearsheets from flipcharts during workshops. It also included confessional, subjective accounts in which the researcher was "self-revealing and self-reflexive" in her account of the research process (Schultze, 2000, p. 4).

(In total 267 such accounts were written by the researcher, using an online journaling software, Penzu.com, between 11 November 2012 and the conclusion of this study.)

In this research study, the inductions were made by using the theoretical concepts and philosophical frameworks as lenses with which to analyse the real-world experiences. The researcher made notes, documenting discussions at meetings, in hard cover books. She recorded and transcribed key sessions with stakeholders, where this permission was granted. She also kept key visual material (drawings, pictures and sketches that were made to explain situations to herself or to others). In addition, she also wrote 'journal' type reflections either online in Penzu or in the form of hand-written accounts on paper and in hard-cover journals. This process of observing, conceptualising and philosophising was like a triple helix, with each aspect influencing and driving the others forward.

This study proceeded through asking a series of questions that related directly to challenges the researcher was experiencing 'in the field' (such as, "how to intervene" (what structural design components are needed), "how to ensure good thinking", "how to generate commitment", and "how to deal with defensive behaviour and bad moods"). These real-world challenges provided a "framework" for setting parameters to what theories might be most relevant in assisting the researcher in thinking about the relevant problem of "how to design purposeful action among divergent stakeholders". A framework of ideas was constructed to provide a useful conceptual bridge between the philosophical paradigm, the theoretical ideas selected, and the ethnographically gathered 'data'. This framework of ideas provided a useful set of lenses to use to probe and understand what was happening in practice. The 'findings' were not used in practice to justify hypotheses, but were instead an attempt to blend what was learnt in practice with logical reasoning about why this may have occurred. Sutton and Staw (1995) assert that if you are doing qualitative research you should use causal arguments. In this study the researcher started with the view that if she had had better theoretical knowledge of "how to" intervene in sector challenges, then she would have been able to be more effective. This was a causal argument based on the assumption that if you know what to do, you will be effective. At the time the view was also held that she was the reason for the breakdown and disharmony, but the process of doing ethnographic reflections, highlighted the "wickedness" of the situational factors and her own "thrown-ness" in it. That said, the causes were multiple and complex and existed at

a personal, interpersonal and situational level. Taking a causal view did not in fact help problem understanding. This study's auto-ethnographic accounts relate to a need, experienced by the researcher, to contemplate a deeper underlying 'why' question that emerged for her personally in the 'real-world' of practice, namely 'Why is the process of facilitating interventions to design purposeful action leading to so much personal and interpersonal disharmony and breakdown?'

Phase One therefore combined a range of data acquisition methods for making observations about the real world problem situation, a conceptual framework of ideas that emerged from a process of reflecting on and analysing real-world experiences, and a personal philosophical paradigm about being-in-the-world and doing-in-the-world. As such, it is argued that this study fulfills the requirements of ethnographic research (Forsythe, 1999; Schultze, 2000). The diagram that follows illustrates the three key elements required in ethnography:

What emerged from the ethnographic research process is considered to be a valid interpretive account because it meets Golden-Biddle and Locke's three criteria of authenticity, plausibility and credibility. Both Walsham (2006) and Schultze (2000) draw on these three evaluation criteria for ethnographic research, in justifying their studies as a valid interpretive account (Schultze, 2000, p. 29). Walsham (2006) explains these criteria as follows:

> *"Authenticity concerns the ability of the text to show that the authors have 'been there' by conveying the vitality of life in the field. Plausibility focuses on how well the text connects to the personal and professional experience of the reader. Criticality concerns the way in which the text probes readers to consider their taken-for-granted ideas and beliefs" (Walsham, 2006, p. 326).*

All three are claimed to be present in this thesis, but this remains to the reader to discern from the text itself.

In discussing how to construct and justify a theoretical contribution, Walsham (2006) makes the important point that although Golden-Biddle and Locke, as well as Klein and Myers' criteria for interpretative research are useful, it is important to not confuse process with outcome. He says that "it is insufficient to say that 'I have applied the principles'. It is essential to say 'Here are my interesting results'" (Walsham, 2006, p. 326). It is claimed that the results of this study are interesting, and the results and conclusions are discussed in Chapter Four and Chapter Five.

However, ethnography was not the only methodology used. Action research was also used. In combination, this methodology made possible a deeper exploration of 'being' as well as 'doing' (ie taking action in the situation as a researcher).

Phase Two: Action Research (AR) in an SSM way

As has been outlined, this thesis began as an attempt to achieve mastery of knowledge in the area of how to design and facilitate interventions aimed at achieving intentional action within the sector development space. It took the researcher on a process that led to the inductive identification of theories that offered knowledge and tools for dealing with challenges encountered in practice, such as: an action workflow for facilitating conversations for possibility (Flores), making sense of situations of concern (Checkland, Senge), shifting bad moods (Flores), dealing with defensive routines (Argyris), inquiring with others (Checkland, Kline, Raelin, Argyris) and being with self and others (Kline, Raelin). These theoretical ideas were combined to produce a design framework for intervening in problem situations. This was illustrated on page 58.

A second research phase was then initiated using Action Research (AR) as conducted within Soft Systems Methodology (SSM).

Given that aspects of SSM are also included within the theoretical framework of ideas, it is possible to get confused as to why SSM is being used as a research methodology *as well*. The fact is that SSM has evolved over the past thirty years. It started out as a very 'science of *method'* oriented approach (suited to 'hard' systems thinking within engineering), but over time it has been internalised in practice, as a 'methodology', with its own particular set of activities (organised into a process), elements and assumptions (Checkland, 2000). In other words, SSM can be used as a methodology *AND or OR* it can also be used as a method.

So what is the difference between method and methodology here?

SSM as a methodology and as a method

Etymologically the word 'methodology' originates from combining the Greek words 'methodos' + 'logos'. 'Methodos' stems from the Greek words 'meta' (meaning "after") and 'hodos' (meaning "a travelling, a way") and means a "scientific inquiry, method of inquiry,

investigation'. 'Logos" means "word, speech, discourse" and "reason". Thus a 'methodology' involves reasoning about and expressing in language a way to go about an inquiry into something.

Checkland (2000, p. s36) argues that a *methodology* is not only a "science of method" (as traditionally conceived) but also "a body of methods used in a particular activity." He says '*method'* can take the form of a specific approach adopted and the specific things the user of the methodology chooses to do in a particular situation. By contrast, '*methodology'* according to Checkland, is at a meta-level of method, and as such is 'about method'. Thus methodology is a framework for thinking and talking about a method (as a possible way to inquire into something). A methodology provides a set of overarching "principles of method" and these principles of method assist the User in selecting particular methods from a repertoire of possible methods. Methodology can thus lead to method (Checkland, 2000) and methodology use is always user-dependent (Checkland, 2000, p.s38).

Elements used in the design of models should not be confused with the frameworks used to explore the problem situation and define the purposeful activity that will be modelled. In SSM, certain frameworks are used in the activity of exploring the problem situation from multiple viewpoints, namely Rich picture building and Analyses One, Two and Three. Further frameworks are used in defining the purposeful activity that will be modeled. These are: Root Definitions (define I, T, O, cast root definition in form 'do P by Q in order to achieve R); CATWOE; Multi-level thinking (system, sub-systems, wider system); Measures of performance (3 E's) (Checkland, 2000).

In order to claim to be "using SSM" in an action research study, certain "constitutive principles" must be met. According to Holwell (cited in Checkland, 2000, p.s38), in order to claim (as a researcher) to be using SSM as a 'methodology', three elements *must be present*. These are: SSM's taken-as-given **assumptions**; SSM's **process** of inquiry; and the **elements** SSM uses within a process of inquiry.

These elements are outlined in Table 5:

Table 5 - Elements required in order to claim to be using SSM as a methodology (SOURCE: Checkland, 2000)

Elements required in order to be able to claim to be using SSM as a methodology		
Taken-as-given Assumptions	**Process of Inquiry**	**Elements used within the Inquiry Process**
Three statements of principle are required in order to claim to be using SSM as a 'methodology': 1. You must accept and act according to the assumption that social reality is socially constructed, continuously; 2. You must use explicit intellectual devices consciously to explore, understand and act in the situation in question; and 3. You must include in the intellectual devices 'holons' in the form of systems models of purposeful activity built on the basis of declared worldviews (Holwell, cited in Checkland, 2000, p.s38)	In the process of inquiry used in SSM, the problem situation and the models of purposeful activity (such as the researcher's own model and the LUMAS model) must be compared in order to: 1. Identify changes that would improve the problem situation and be considered to be both desirable and culturally feasible, and 2. Find accommodations (compromises), which can be made between conflicting interests in order to enable action-to-improve the problem situation to be taken. This process of inquiry should be informed by an understanding of the social, cultural and political history of the situation. Frameworks such as Rich Picture diagrams, Root Definitions, CATWOE, etc. *may* be used but are not essential (Checkland, 2000)	In SSM, models of purposeful activity are built as intellectual devices for inquiring into the problem situation. One example of a model is the LUMAS model, which contains the following elements: • User (U) of Methodology • Real-world problem situation (S) • Methodology (M) formally described (and source of the approach adopted) • Approach adopted to improve the situation (A) • Learning (L) (Checkland, 2000)

In SSM, the inquiry process is viewed as iterative and unfolding through the flux of time. As a result it is also a process of "learning a way, through discourse and debate, to get to accommodations, in the light of which either 'action to improve' or 'sense making' is possible" (Checkland, 2000, p.s38). SSM's LUMAS model, illustrated in Figure 18, shows a process that allows a User (U) to learn about a problem situation in order to take action to improve it. This model incorporates a "methodology-informed" approach (containing the three key elements required in methodology use as per Figure 16) where the methodology that is used is SSM if the requirements illustrated in Table 5 are present. In Figure 18, a user (U) (such as this researcher),

appreciating a methodology (M) as a coherent set of principles (such as SSM), and perceiving a problem situation (S) (such as how to intervene in a 'wicked' problem requiring divergent stakeholders to design purposeful action), asks herself: What can I do? She then tailors from the methodology a specific approach (which is informed by a framework of ideas that she constructs), which she regards as appropriate for the problem situation, and then uses it to help her achieve a better improvement of the situation than would have been the case if she had not used the methodology.

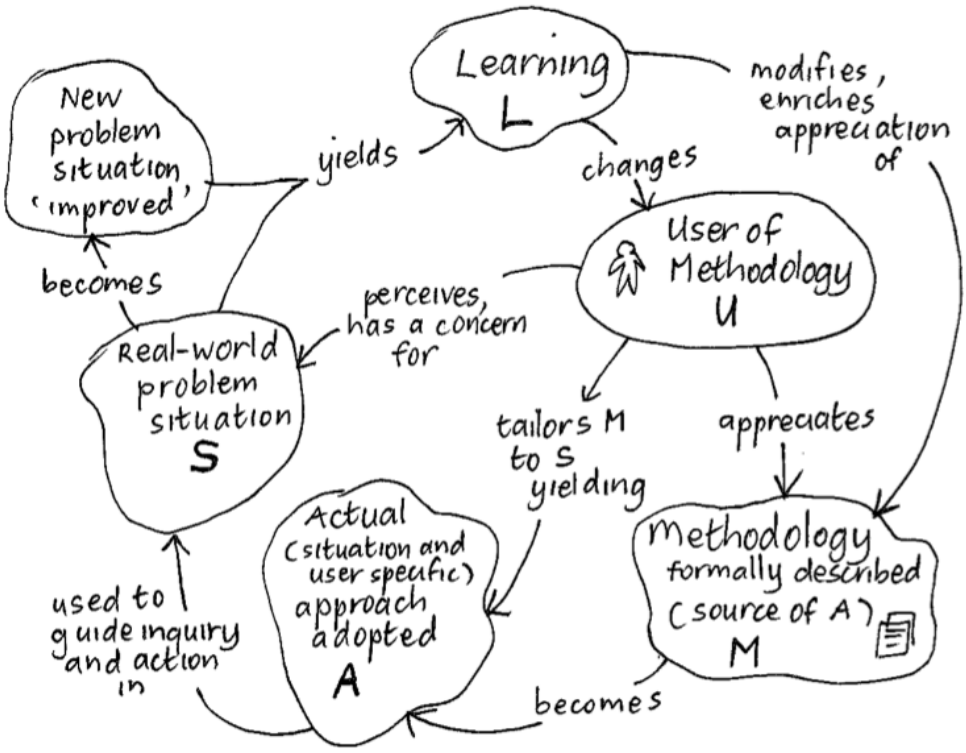

Figure 18 - The LUMAS model: Learning for a User by a Methodology-informed Approach to a problem Situation (SOURCE: Checkland, 2000, p.s37)

SSM as a form of Action Research

SSM originated in 'hard' systems engineering situations in which people were trying to take action. "Hard" systems thinking tackles well defined problems (such as optimizing the output of a chemical plant) whereas SSM tackles hard to define problems (Checkland, 2000, p.s49)As a result, SSM research can be located within the 'action research' tradition originating from the work of Kurt Lewin, a psychologist who asserted that human dynamics in real social events could not be studied in a laboratory (Sutton & Staw, 1995, p. 376). That said, SSM is a particular

type of action research, called 'interpretive action research'. As such the crucial elements in the action research approach that is followed in SSM, will include a collaborative process between researcher and participants, a process of critical inquiry, a human activity process, and a deliberate process of reflective learning (Checkland, 2000; Checkland & Holwell, 1998).

For the sake of clarity, it helps to begin by declaring the elements that are required in research *in general*, before differentiating what would be required in order to claim that the research is 'action' research. Checkland argues that '*any piece of research'* may be thought of as entailing three elements: first, some linked ideas in a framework (i.e.. a 'framework of ideas'); second, a way of applying these ideas in a methodology; and third, an application area or situation of concern. Thus, a framework of linked ideas (F) is used in a methodology (M) to investigate an area of interest (A). Using the methodology can teach us not only about the area of research interest, but also about the adequacy of the framework of ideas and methodology. Reflection on what has been learnt may lead to modifications and revisions to the framework of ideas and the area of research interest. In fact, a change to or modification of F, M, and even A, should be expected in action research (AR), according to Checkland and Holwell (1998, p.13).

The elements relevant to *any* piece of research are illustrated in Figure 19:

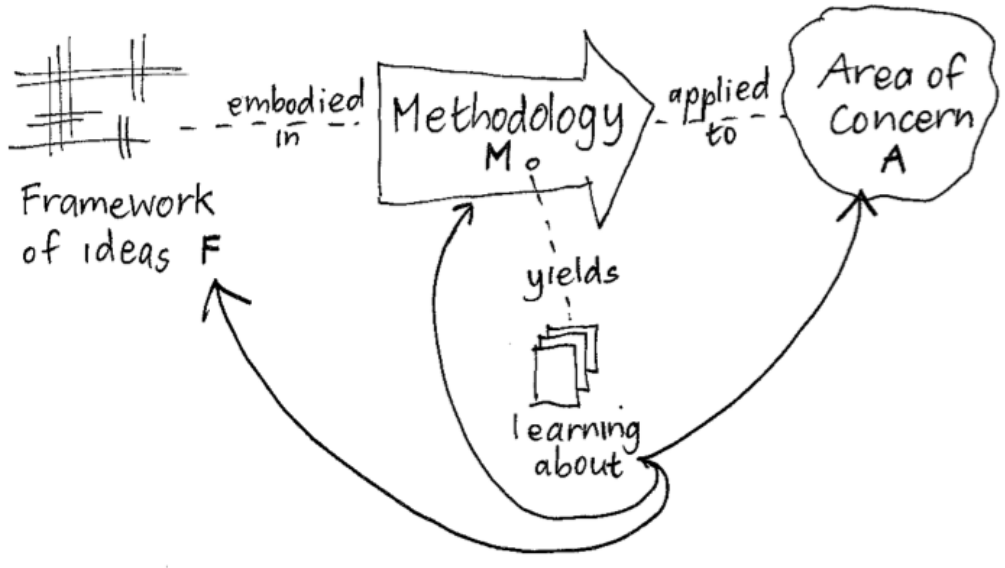

Figure 19 - Elements relevant to ANY piece of research (Source: Checkland & Holwell, 1998, p.13)

For the sake of clarity, the process of action research in an SSM way, is listed in Table 6 next to the general process of a cycle of action research in general, to highlight how interrelated the two are.

Table 6 - Comparison of process of Action Research conducted in an SSM way, versus in the general way

Process of action research conducted in an SSM way	General process of a cycle of action research
1. Introduce the 'area of concern' (A) (also called the 'real world problem situation' (S) that the research will address) 2. Define the 'framework of ideas' (F) (also called 'research themes') 3. Identify and define the 'methodology' (M) that will be used **4.** Enact a cycle of action research following the AR process **– <u>See Right Hand Column to compare General AR Process</u>** • Declare the area of concern (A) and enter the real-world problem situation (Checkland uses (A) or (S) interchangeably for this in his diagrams) • Establish roles of 'researcher' and 'participant' (i.e. identify the user of the methodology (U)) • Declare upfront and write down F, M and A (in effect declaring upfront the epistemology i.e. the set of ideas and the process in which they are used methodologically, so that the research process can be *recoverable* by others) • Take part in a 'process to improve' the situation (i.e. take part in an action experiment in the situation) • Rethink roles, the declared F and M and action in the situation • Exit the problem situation • Evaluate and reflect on experiences acting in the situation and record learning in relation to F, M and A (or S) 5. If required, continue to iteratively enact further cycles of action research (i.e. the process of inquiry in SSM is cyclical and iterative) (SOURCE: Checkland (2000) and Checkland and Holwell, 1998)	• Enter the [social practice of a] real world problem situation (A, the area of concern for the research) (informed by research themes within which lessons can be sought) • Establish roles (becoming involved as both a researcher and a participant, with other participants) • Declare M and F (the Framework of Ideas and Methodology of the research study) and how they link to the research themes (which must also be declared upfront) • Take part in a change process (i.e. action in the situation) • Rethink 2, 3, 4 (to make sense of the unfolding experience using the declared M and F) • Exit the problem situation (via negotiation, when the researcher judges that significant learning in the interaction between F, M and A has been yielded) • Reflect on the collaborative involvement and the outcomes of the experience, and tease out and record learning in relation to F, M and A to get findings, which may lead to new research themes (SOURCE: Checkand & Holwell, 1998)

In action research specifically, the process the research follows therefore involves the following set of steps:

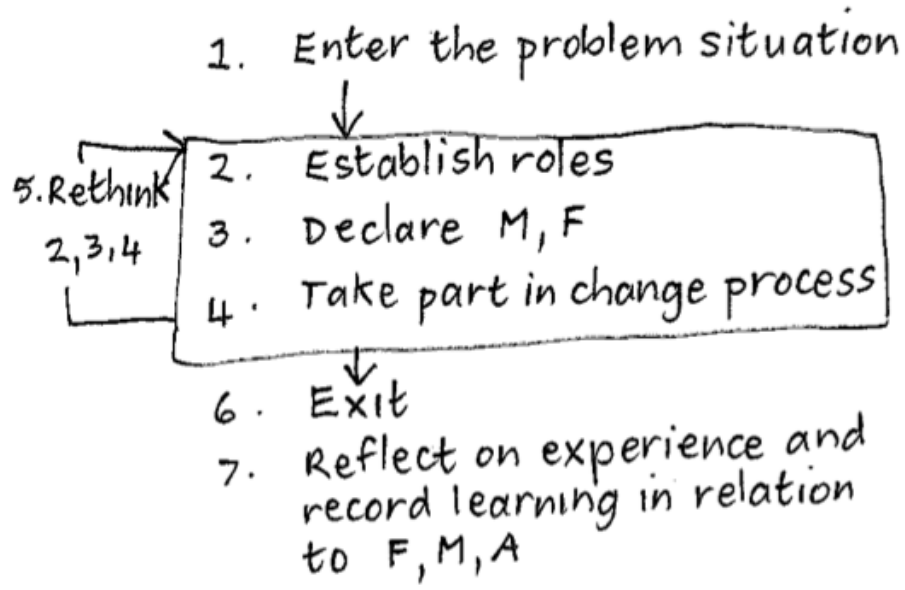

Figure 20 - The process of action research, as it is done in AR in general (SOURCE: Checkland & Holwell, 1998, p.15).

It is typically only in "write-up" that the results reveal whether or not there is a strong case to be made that significant learning has resulted. (The results of this study are provided in Chapter Four, with the case for significant learning being made in Chapter Five.)

In AR, the researcher works not only with hypotheses but also with propositions or relevant 'research themes' within which learning can arise (Checkland & Holwell, 1998, p.14). The (ideal) cycle of action research is as follows: The researcher, who involved in the research with a dual role as both a participant and a researcher, enters a real world problem situation (A), having declared a framework of ideas and a methodology upfront, and takes part in action in the situation. This action enables reflection on the involvement based on F and M, which leads to findings (Checkland & Holwell, 1998).

The cycle of action research in human situations is illustrated by Checkland & Holwell (1988, p.15) as follows:

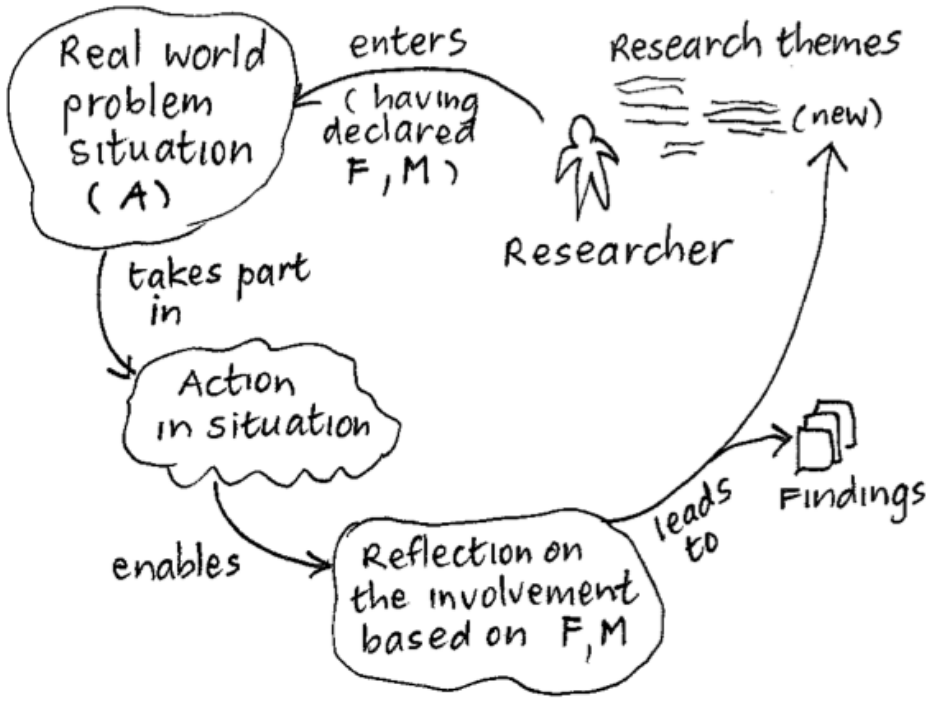

Figure 21 - The cycle of action research in human situations, as it is done within SSM (Source: Checkland & Holwell, 1998, p. 15)

This section explained SSM as a methodology and as a method, highlighted that SSM is a form of interpretive action research, and differentiated between the process of 'action research conducted in an SSM way' and the process of 'action research in general.' Having been described three times, from different angles, the research process actually followed in Chapter Four should be easily identifiable as a form of interpretive Action Research conducted in an SSM way. The process of action research must be enacted based on a declared-in-advance methodology (encompassing a particular framework of ideas), in such a way that the process is recoverable by anyone who wishes to scrutinize it. These declarations are made in Chapter Four.

Summary

In seeking to intervene as facilitator, there was an acute appreciation that the researcher also had a worldview, and this worldview was informed by her own 'domains of concern' (as Flores (2012) would put it) and her own particular philosophical paradigm. This chapter stated that this study is informed by a personal philosophical stance that is based on a uniquely personal combination of phenomenological and pragmatic philosophical paradigms that influenced and

was influenced by a set of theoretical ideas and concepts that were considered relevant to the problem of how to design purposeful action among divergent stakeholders, when problems are 'wicked'. It was argued further that two research paradigms would be of value to the study. A first phase needed to be an auto-ethnographic interpretive study, during which theoretical concepts were brought to light inductively, and then used to build an (emergent) theoretical framework. (This framework was illustrated at the end of Chapter Two.) In addition, a second phase was required in order to test the theoretical ideas in a 'real world' case study. As a result, a set of action research cycles was proposed as a means to test out the emergent framework in a real world situation. The study's methodology can be summarised in Table 7 as follows:

Table 7 - Summary of the Study's Methodology

Research context	The research took place within the context of ICT cluster and sector development and intra-organisational change efforts to facilitate the design of purposeful action among divergent stakeholders from a position as Executive Director of a sector development agency and as a consultant. It evolved into a further effort to understand why the process of facilitating interventions was leading to so much personal and interpersonal disharmony and breakdown, and develop a theoretical framework of ideas that could provide liftoff out of this "breakdown".
Research paradigms	Interpretive Research Action Research (as conducted within Soft Systems Methodology)
Methodology	Two phase process. The first phase comprised an inductive approach based in ethnographic research methods that was used to build a theoretical framework. The second phase consists of two action research cyles (action experiments) to test and refine the (emergent) theoretical framework
Data-making methods	Consisted of qualitative sources such as: • Meeting notes captured in more than 10 black hardcover A4 counter books • 15 Rich picture diagrams and sketches • Transcripts of 3 stakeholder sessions • 267 reflections captured as journal entries in Penzu.com • Journal entries captured in 2 black hard cover counter books • Workshop preparation notes • Notes from team feedback sessions • 10 Causal loop diagrams • More than 20 tearsheets from flipcharts during workshops
Data Analysis Strategy	In the initial ethnographic phase, reflections, notes and discussions were used as the sources of support for inductively unearthing concepts that, through a hermeneutic interpretive approach, were then used to direct a search for theoretical concepts. These concepts were combined into a theoretical framework (or personal knowledge system). In the Action Research phase, this emergent theoretical framework is used to test and further refine this framework.

The study's interpretive phase was considered complete when the researcher's framework of conceptual ideas was offered as a possible structural design for intervening to create purposeful action among divergent stakeholders at the end of Chapter Two. The case for this interpretive process having followed a valid ethnographic process was covered in this Chapter. Chapter Four will describe *only* the Action Research study that was conducted as part of the second phase of this study.

Chapter 4: Action Research Study and Findings

Introduction

In Chapter Two, a framework of ideas emerged inductively using an interpretive research approach. This chapter begins by recalling the persistent problem and overall research themes being investigated in this thesis. It then makes a claim for why a 'problem situation' within a social housing organisation, was considered both relevant to the research problem and themes, as well as adequate for the task of testing out the conceptual framework (developed in the interpretive phase) in a second phase of action research. The diagram in Figure 22 illustrates the process of action research that was followed by the researcher in the two action research cycles:

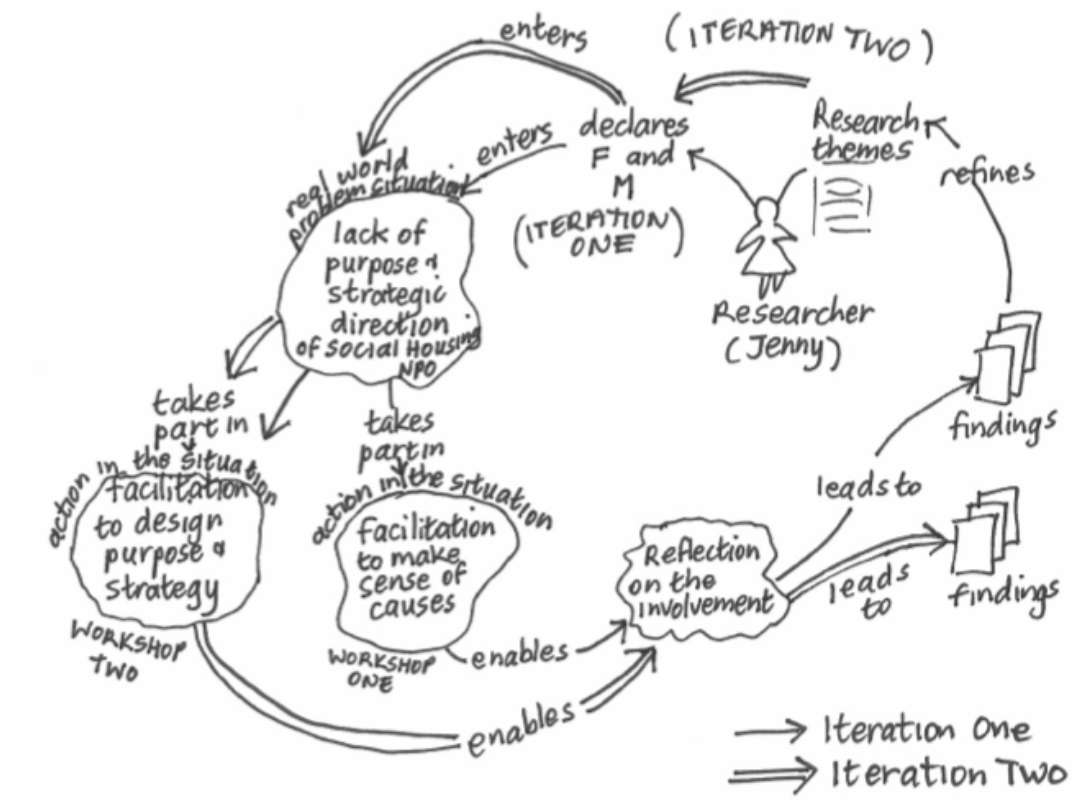

Figure 22 - Researcher's own construction of the cycles of action research conducted in this case study situation (Adapted from Checkland and Holwell, 1998, p.15)

The chapter continues by explicitly declaring the intellectual frameworks and the process by which the study uses them to define what counts as knowledge in this piece of research, as is required when conducting action research (Checkland, 2000; Checkland & Holwell, 1998). This ensures that the process that is followed can be recovered by other researchers who might wish to critically scrutinise the research at a later stage. Thereafter, further research propositions are made, that were deemed to offer opportunities to experientially appreciate issues related to 'being' when 'doing'. Thereafter, the two cycles of action research that were conducted are described, and the key findings reported. Finally, the possibility is explored that Austen (2010)'s Knowledge System model may fill a gap in the area of a 'personal knowledge system' that could inform how a facilitator chooses to intervene in a design for purposeful action. This is described before concluding this chapter.

The overall research problem and research themes of the study as a whole

This study's research problem, research themes (stated as questions) and the framework of theoretical contributors that emerged inductively in the interpretive phase, was illustrated Chapter One and summarised in Table 4. The researcher's diagram of these is repeated here:

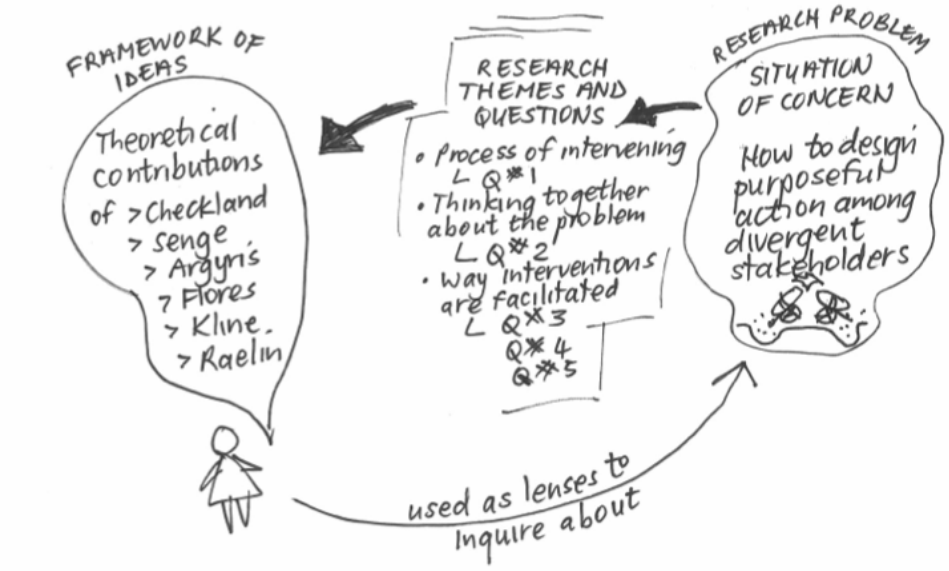

Figure 24 (REPEATED Figure 2) - Researcher's own construction (This diagram is informed by the work of Checkland (2000))

Upfront explicit declaration of the Action Research study's framework of ideas, methodology and area of concern

In an action research (AR) process, a cycle of activities is enacted *in a real-world problem situation* with the intention of generating learning about the area of concern, the intellectual framework and the methodology employed. The challenge with the "real world" is that it is dynamic and problematical, and things can change and accommodations need to be made to deal with this. Since the researcher resigned from her job before this study was completed, and since she had resigned due to experiencing personally the kind of conditions of disharmony and breakdown that the study was seeking to understand, she was not able to utilise her previous work environment as a 'problem situation' within which to apply the concepts and the framework of ideas that she had identified as relevant during the interpretive research process, and conduct only an auto-ethnographic study. Fortunately, SSM is designed to deal with real-world situations and accepts the idea that action researchers immerse themselves in dynamic processes in human situations, and because such processes can be volatile, they will have to follow the process along *whatever path it takes* as it unfolds over time (Checkland & Holwell, 1998).

The most important principle in Action Research is to *declare in advance* the elements of F (framework of ideas), M (methodology) and A (area of concern), precisely *because* these elements are *susceptible to change* in studies in which the researcher becomes involved in the flux of real-world situations. (Checkland & Holwell (1998) note that this principle is almost totally neglected in the literature.)

It is also important to declare upfront what the research themes are, and then explicitly argue what the supposed connection is between these themes, the framework of ideas and the methodology. Explicitly declaring F, M and A upfront makes it possible to define the epistemology (ie the set of ideas and the process in which these ideas are used methodologically, that will show what will count as learning from the research). Doing so avoids the risk that the research will lack validity or that the outcomes will be judged to have only anecdotal value. It also makes the process recoverable to other researchers and allows the researcher's reasoning to be made explicit enough so that it can be publicly tested and disconfirmed (Argyris, 1982, p. xx).

"[It is this] intellectual structure that will lead to findings and research lessons being recognised as such" (Checkland & Holwell, 1998, p. 14).

In this study, a descriptive process of what was actually done in the case example that is described in this chapter, can be illustrated as follows:

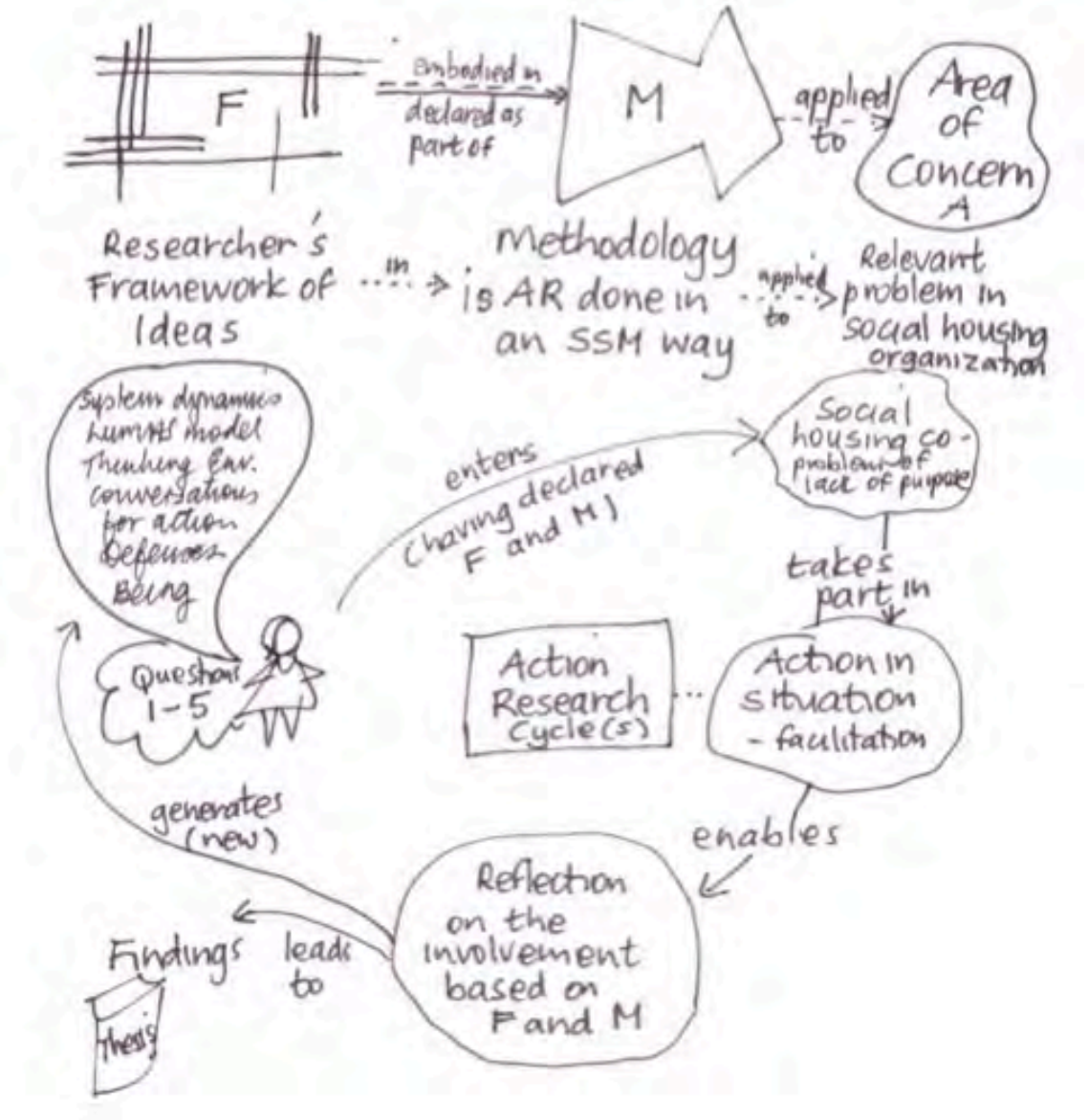

Figure 23 – Researcher's own construction, illustrating how F, M and A these were actually used within the cycle of action research

In Chapter Three, it was noted that SSM is virtually inseparable from action research, but to claim to be using SSM when doing action research, you have to ensure that the three components of SSM's taken-as-given assumptions; SSM's process of inquiry; and the elements SSM uses within a process of inquiry, are present in the study. These declarations are made explicit in Table 8 as follows:

Table 8 – Upfront declarations made by the researcher before the action research study commenced

Requirement when using SSM in Action Research	What is declared explicitly will be (and has been) used in the Action Research Cycles One and Two
Framework of ideas	The researcher constructed, through an interpretive process, her own framework of ideas that is illustrated in Figure 15 on page 58. This is expressly declared to be the study's framework of ideas.
Methodology	Action research done in an SSM way.
Area of concern	How to design purposeful action among divergent stakeholders.
Taken as given assumptions	Social reality *is* assumed to be socially constructed, continuously, even in clusters and organisations. Explicit intellectual devices combined in the researcher's self-constructed framework of ideas (as illustrated in Figure 15 on page 64) will be used to explore, understand and act in the situation in question. This framework includes the LUMAS model of purposeful activity. The researcher's philosophical stance, influencing her worldview of the situation, is declared to have been informed by a pragmatic-ontological philosophical stance (as described in Chapter Three).
Process of inquiry that is used	The process of inquiry that is used to identify changes and find accommodations will include Senge's causal loop modeling, Kline's Incisive Questions, Argyris' productive reasoning, and Raelin's advanced facilitation skills of 'inquiring with others'.
Elements present in the process of inquiry	U: **USER** – is the researcher. F: **FRAMEWORK OF IDEAS** – Is the researcher's own construction of a framework of ideas as illustrated in Figure 15 on page 64. M: **METHODOLOGY** – Is action research done in an SSM way. S: **SITUATION OF CONCERN** – Is the actual problem situation within a social housing NPO framed as a "a lack of clear purpose and a lack of strategic direction", that was studied. L: **LEARNING** – The researcher makes findings in each of the two action research cycles and these findings led to learning about her own framework of ideas A: **ACTUAL APPROACH ADOPTED** – This is the approach the researcher used in the actual case example when combining M, F and S and accommodating client requests.

Background to the 'situation of concern' that was entered

The action research cycles were enacted within the domain of a well-established non-profit Social Housing organisation. The organisation was in a major transition process and had recently undergone a difficult legal process to change its CEO and appoint a majority of new board members, as well as a new CEO. The new CEO wanted help facilitating a Board Strategy Development process. Together with other consultants, a set of interventions informed by SSM and founded in Business Analysis (such as Causal Loop Modelling) and in Integrative Thinking were proposed. (The integrative thinking element is not covered in this thesis.)

The researcher's role, as agreed with the client (who was the 'problem owner') was to design a process and facilitate it. (For client purposes it was called a "Strategy Workshop" and the client was in agreement that it would include a sense-making process and a process to design purposeful action.) Other team members interviewed staff and board members ahead of the workshops and gathered information for identifying the problem owner and generating social and political analyses of the situation. The reflection and learning was done with the CEO immediately after each workshop, individually afterwards in writing up reflections and session outcomes, and collectively as a team. A report, containing artefacts, a record of the process and the action points that were agreed, was written up afterwards and given to the CEO.

The initial client requirement was only to conduct a single Board Strategy Workshop. However, at very short notice, there was a request made by the Board of Directors for the CEO and management team to hold their own workshop before the strategy development workshop, with the intention that the management input would be presented at the start of the Board workshop. As a result, there were two iterative action research cycles.

Why the study's overall research problem and themes were considered relevant to the case in which the action research intervention is conducted

The specific research intention was to test whether or not the framework of ideas that had been inductively generated, could provide relevant learning related to the questions that this study set out to investigate. As the researcher was no longer employed within the sector development space, there was a search to find another client site to study in which participants from industry,

government and academia needed to work together. There were striking similarities between the challenges faced by the client CEO and the challenges that I, as the researcher, had faced as Executive Director of a cluster organisation. We were both women who had to lead organisations that did not have a clearly defined purpose, had experienced a history of management-board conflict and dysfunctional politics, and had Boards comprised of individuals from industry, government, academia and civil society who had very different worldviews on what was required. We both had to design action to address challenges that were systemic and 'wicked' in the sense that they appeared to be unsolvable. In addition, both organisations operated in a market environment of increased market competition and pressure to cut costs, and increasingly debilitating governance related to government funding.

The questions that had been set at the start of the study that related to "how to design purposesful action among divergent stakeholders" in the work in ICT sector development and intra-organisational change, were found to also be relevant in the case of the Social Housing NPO. The framework of ideas that was generated in the ethnographic phase to address challenges experienced in sector development, were judged to be relevant to the case study for the reasons that have been outlined, and then the first Action Research cycle was designed.

Given that the organisation did *not* have a history of open sharing of information, and had challenging politics, the probability of conflict arising between managers and board members during the facilitation process, was a major concern identified as a reality by the client. As a result, the assumption was made upfront that Senge's (1990) causal loop diagrams (as a means of sense-making), Kline's (1999, 2010) key components of a Thinking Environment (as a means of setting an environment conducive to openness), and Argyris' foregrounding of Model I behaviour (as a way of understanding defensive reactions), would be the most relevant contributions in the researcher's framework of ideas, to draw on in this case.

This is reflected in how the sessions were designed. Given these assumptions, four research propositions were made before the action research commenced. Whilst making propositions is not required in action research in SSM, the researcher wanted to learn more in relation to certain aspects of her model. Action research requires declaring what is done very explicitly so the process is recoverable later, so these propositions are made explicit.

Research propositions

Four propositions were made in the form of questions that the workshops should answer for the researcher *as facilitator* of the process. In a discussion or debate, propositions are statements that 'set forth' to attempt to affirm or deny something. They may function as a premise or as a conclusion. According to Vorobej (2006), "it is possible to express a proposition using any kind of grammatical construction" including interrogative grammatical constructions". (This type of construction asks a question that cannot be simply answered with a yes or no). For this study, the decision to use interrogative propositions was made *intentionally and consciously* as a result of the influence of Kline (1999, 2010) who asserts that the mind thinks best in the presence of questions. The same four interrogative propositions were made for both the first and second action research cycle. These are as follows:

Proposition One: Will establishing and maintaining a Thinking Environment create productive conditions for thinking about the problem situation and lead to the achievement of the desired business results for the session?

The first key activity of SSM is to make sense of the problem situation from multiple perspectives using tools such as Rich Picture Diagrams. However, whilst SSM might implicitly assume that the right conditions will exist for productively thinking about the situation of concern, it does not explicitly include an activity to create the right thinking conditions (such as 'ease'[9] and 'appreciation'). It was proposed that Kline's Thinking Environment could provide this. Thus it was stated explicitly upfront that creating and maintaining the Ten Components of Kline's Thinking Environment throughout the days of the workshops was desirable. To achieve this, it was decided that the facilitator would briefly explain Kline's Ten Component behaviours to the participants, particularly the need to maintain ease, encouragement, and a 5:1 ratio of appreciation to negative comments. In addition, specific techniques Kline uses such as 'rounds'

[9] There was a curiousity as to whether or not the facilitator's own internal state of 'ease' would affect the 'ease' of the other participants. This interest was inspired by research on 'affect contagion', which is the (usually) unconscious transfer of feelings between living beings. In imagining beforehand what that state of 'being' might be like, Kohanov (2013)'s suggestion of leaning back and breathing immediately that you sense emotional stress in the participants as 'beings', was used as a guideline. Given that this is obviously highly subjective and the participants would not be interviewed, and physiological bodily responses would not be measured, this would not be set as a proposition but included in reflections if relevant. Nonetheless, it was declared in writing that the facilitator would do an (online) instructor-led mindfulness breathing exercise (20 minutes) at home on the morning before the session. In addition, short sessions of 60 second mindfulness practice (bringing attention to the breath) would be done with the participants at the start of the day and before each session, to help slow things down to a pace of 'ease'.

and ‘thinking pairs’ would be incorporated into the sense-making activities used. It was assumed that if the conditions were maintained the ‘desired business results’ (ie the outcomes set by the client) would be achieved. For the sake of clarity, Table 9 outlines Kline’s components of a Thinking Environment and whether or not they were included in each AR Cycle.

Table 9 - Summary of Kline's components for Thinking Environments used in a group setting, and where they were tested (SOURCE: Kline, 2010, p. 231)

Activities recommended by Kline in running a Thinking Environment with a group	AR Cycles in which these activities were included
Tell people good thinking is the aim, that everyone’s thinking matters equally and the session will be structured to reflect those principles	Done in AR Cycle One and Two
Present the agenda items as questions	Done in AR Cycle One but not Cycle Two
Do an opening “success” round (highlighting positives)	Done in AR Cycle One and Two
Do agenda item Rounds (always starting with a question)	Used in AR Cycle One to identify most relevant problem area to explore, and also done for Agenda for AR Cycle Two
Do Open Discussion without interruption	This was attempted in AR Cycle One but the “without interruption” rule was regularly broken
Get people thinking about assumptions	In AR Cycle used Senge’s Causal Loop Models to achieve this
Ask Incisive Questions	Not done. Questions were asked but not in the Incisive Question format that aims to get to underlying assumptions
Get people thinking in pairs	Done in AR Cycle One
Get people thinking in small groups, with Rounds	Done in AR Cycle One. Attempted in AR Cycle Two. Some groups did it and it worked well. Others ignored it and were dominated by one or two individuals.
Get people after small groups to share their freshest thinking, not report on what was said	In AR Cycle Two this was done, but it did require using Raelin’s skills of “probing” and “testing”
Capture ideas in people’s own words	Done in AR Cycle One and Two
Have people appreciate each other’s good qualities	Done in AR Cycle One and Two, worked very well
End with a success Round	Done in both AR Cycles. Worked well.

It was also stated that the facilitator would aim to 'do' the following: Keep asking questions. Trust that the participants really do have their own answers. Not interrupt (except when people exceed their equal turn). Resist the urge to provide research information and theoretical models unless it is directly requested. Resist the (ego) urge to be seen as clever. Do not expect the self to know all the answers, just expect to pay attention 100% and 'be' present and affirming. Finally, the researcher would aspire to notice when she was feeling anxious, insecure, and wanting to interrupt, and focus on her breathing until she is 'back in the room' (ie 'present' in the moment). (Mindfulness is recognised by Raelin (2002) as having value. Sixty seconds of focus on breathing was also introduced as a way to get some mindfulness into the room.)

Proposition Two: Will there be divisive conflict among group members if the Ten Components of Kline's Thinking Environment are established and maintained?

Nonetheless, the researcher was curious to discover if any conflict would arise if the Thinking Environment was maintained by the group, and declared this upfront. What is interesting about Kline's model is it (arguably) implies that if you start with the right conditions for thinking, there should not be problems with conflict during Sessions.

The client had warned upfront that there was a history of divisive conflict in the organisation and we should expect this to emerge in the workshops. Argyris' model assumes that any organizational change will have to deal with defensive routines and implies that getting to effective action requires Model II behavior (such as sharing valid information and productive reasoning, so that participants can make free and informed decisions to make commitments to act (or not)). However, whilst Argyris and Schön (Argyris, 1982, 1993; Argyris & Schön, 1974, 1991, 1996) state that instructors should design environments to support Model II behaviour, they do not have a clear and simple method for how to create an ideal 'environment' for thinking in a group like Kline (2010) does. (Like Kline, however, they also highlight the need to integrate feelings, noting that Model II allows people to express positive and negative feelings in a contained way Argyris and Schön, 1991, p. 108).

Proposition Three: Would the Causal Loop Diagrams support the sharing of sense-making about the situation of concern?

In mapping out her own organisation's system's dynamics, using Senge's (1990) concepts, the researcher had realised that causal loop modelling might be a valuable process for making sense

of problems in situations of dynamic complexity where cause and effect is not linear, and different stakeholders' actions can have unintended side effects on other stakeholders in the system. As a result, the possibility that analysis of problem situations using systems dynamics (causal loop models) could be included as a "structural" component in a process to design purposeful action was identified. This proposition was set to test this idea.

Proposition Four: Will the facilitator be able to embody "andragogical" skills of "Being" if the participants turn on her (as facilitator) during the process?

Argyris and Schön (1991) assert that in a change process, it is to be expected that at some point the participants might turn on the facilitator if situations arise that they perceive to be threatening or embarrassing.

It was anticipated that some people may feel uncomfortable and frustrated by the Thinking Environment process (perhaps because of being socialised into operating in a world that values what Kline (2010) calls 'Control, Urgency and Certainty'). It was thus possible that participants may become irritated by the researcher's design of the process, which only structured "action" into the last session of the day because it was believed that as soon as the group articulated a shared sense of purpose, informed by the sharing of valid information, any actions that were agreed would have a higher level of internal commitment.

The facilitator proposed that if participants confront her or the facilitation process, she would attempt to model the skills of "Being" that Raelin highlights (namely being vulnerable, curious and present), as well as "andragogical skills", such as openness, tolerance of uncertainty, empathic enouragement and acceptance without judgement (Raelin, 2006, p. 86).

The various aspects of the research themes and interconnected framework of ideas, plus the research propositions, as declared for AR Cycles One and Two, are summarised in Table 10.

Table 10 – Table of research questions, four research propositions and framework of ideas

Research themes (research questions)	Four Research Propositions	Framework of ideas
(1) … [design of] "*purposeful* action" (2) … [productive] thinking about the problem situation … (3) … commitment (4) … [dealing with] defensiveness and conflict … (5) …process of facilitating …[and] … personal and interpersonal disharmony and breakdown	• **Proposition One**: Will establishing and maintaining a Thinking Environment create productive conditions for thinking about the problem situation and lead to the achievement of the desired business results for the session? • **Proposition Two**: Will there be divisive conflict among group members if the Ten Components of Kline's Thinking Environment are established and maintained? • **Proposition Three**: Would the Causal Loop Diagrams support the sharing of sense-making about the situation of concern? • **Proposition Four**: Will the facilitator be able to embody "andragogical" skills of "Being" if the participants turn on her (as facilitator) during the process?	• Checkland's LUMAS model, *plus* • Senge's Causal Loop Diagrams, *plus* • Kline's Thinking Environment, *plus* • Argyris & Schön's Model I and Model II theory-in-use and Defensive Routines, *plus* • Flores' conversations for action and commitment management theory, *plus* • Raelin's advanced facilitator skills of "Being" present, inquisitive and vulnerable, *plus* • Mindfulness-based breathing (as a way of bringing attention to bodily sensations experienced in the present moment)

These propositions being made, and the necessary upfront declarations now having been made explicit, all that now remains is to explain what actually happened in each action research cycle and what the findings were. More focus is given to AR Cycle Two than AR Cycle One.

The first Action Research Cycle (Workshop One: Sense-making)

Background

The first action experiment (AR Cycle One) was held with the CEO of the social housing NPO and her management team on 1 April 2014. A one day workshop was held in the clients' offices. In my declared role as "facilitator" of the session, I facilitated, with support from other team members. These team members included four other Masters students and their supervisor, an associate professor at their university. The desired workshop outcome, agreed with the CEO who was the 'problem owner', was to undertake a collective sense-making process to understand the

forces that had been operating which had created the 'wicked' historical problem-situation that the organisation found itself in. The artefacts of this sense making process would be Causal Loop Diagrams used as a form of "illustrative diagram" that could then to be used to inform the development of purpose and strategic action steps at a second workshop with Board members, to be held 10 days later.

The day ran from 09h00 – 16h00, with lunch and tea breaks, and was structured into four sessions:

- Session One: Setting up a thinking environment and getting agreement on what they think the key strategic challenges are that need to be addressed.
- Session Two: Explaining how Causal Loop modelling works, and doing an example on one of the strategic challenges with the group
- Session Three: Small groups each tackle one of the problem areas, attempt to draw a causal loop diagram and share it with the others
- Session Four: Pulling all the threads together and concluding with appreciation round

Design for purposeful action followed and findings

The first action research cycle went well. Everything that was proposed was done in the way that was proposed. The desired outcomes were achieved. The group's mood progressed from tense to positive, productive and enthusiastic. Artefacts (in the form of Causal Loop Diagrams) were drawn. Participant and client feedback was overwhelmingly positive.

The opening question to the group, answered in a 'Round' with everyone speaking uninterrupted for one minute, was: "What delights you about being part of this strategy process?" After the introduction round, participants were asked to identify for themselves what they thought the organisation's greatest strategic challenge was. (They had also been asked to reflect on this question before the session and write down their thoughts, so this was not a new question). They were then asked to re-phrase this challenge as a question not as a statement. Kline's technique of "Thinking Pairs" was used to allow them to practice doing this with someone else. The facilitator's question was: "What is the question behind your assessment of what the organisation's greatest strategic challenge is?" … They found this quite difficult to do initially.

In Thinking Pairs they struggled to listen to one another without interrupting and they learned that they don't listen well to one another.

In the second session, the process was reversed and participants were asked to extract out of their questions what the strategic problems were. This required referring back to all the original questions (which were captured by team members) and asking participants what the perceived problem was that lies behind this question. This generated a set of key problems that clustered around a few issues, such as "identity crisis", "lack of focus", "ineffectiveness", and "the funding model". It was noted that despite the fact that they had been initially asked to think of the problem, and then turn it into a question; when they then had to take that question backwards to its original problem, many of them struggled to state the problem despite having started the thinking process with that exact problem. However, the key problems were articulated much more clearly as a result. (The mind does think better in the presence of questions, it seems.)

No Model I defensive routines emerged during the process. Participants were generally cooperative and collaborative, and there was no need to highlight Model I behaviour as it did not emerge. We did deal with one emotional issue and the group agreed to discuss it and did so productively, sharing valid information. Through this the group as a whole acknowledged that they see themselves as victims of the system. In fact, what was remarkable was that the learning that did happen, especially through the process of small groups producing Causal Loop Diagrams to make sense of particular challenges (which took most of the day), allowed them to begin to see the organisation's complexity and how certain structural problems were feeding the perpetuation of these challenges.

Overall, everyone participated in all sessions and the level of 'appreciation' of one another's contributions (as expressed in "Rounds") was high. There was an openness and a level of engagement in the session which was surprising to them, and the client (the new CEO) said she had not expected his. Energy levels were high, and the mood was positive.

In AR Cycle One we managed to cultivate respect, ease and interest by building a Thinking Environment and the results were stellar. Kline's method was found to generate productive thinking and positive moods, and Senge's causal loop modeling process was found to be highly effective at facilitating sense-making about the problem situations faced by the organization. Following AR Cycle One, reflections were written and these are included in Appendix One.

The first AR cycle highlighted that facilitating an intervention requires 'staying with self', 'inquiring with others' and 'being' (as a set of facilitation skills). In between the sessions, the management team, with support from the researcher's colleagues, refined and combined all their causal loop diagrams into one 'master' picture that could be presented to their Board as requested. A narrative describing this causal loop model was also compiled.

The second Action Research Cycle (Workshop Two: Purposeful action)

Background

The second AR cycle took the form of a Workshop held with the CEO, her management team and her Board of Directors on 11 and 12 April 2014. The session was held at a hotel conference centre away from the office. It was an intensive session over one and half days (from 13h00 – 22h00 on Day One, and 08h00 – 16h00 on Day Two).

It should be noted at this point that a comprehensive Organisational Evaluation Report had been prepared by independent consultants on the organisation's challenges, and Management and Board members had been exposed to these findings in the two weeks prior to the Strategy Workshop. The client advised the researcher that at some point during the Workshop, there would be pressure to make decisions about this report, particularly because all Board members would be present at the same time at the Workshop. In addition, whilst the researcher had met the CEO and Management team at the first workshop, she had never met any of the Board members before. In fact, many of the Board members had never even met one another as it was largely a new Board, recently created, that had not yet had its first Board meeting. Most of the Board members also did not know anyone on the Management Team either as there had historically been a clear separation between Board and Management.

With this workshop serving as the initial gathering of these groups, an implicit, but important component of this session was an introduction to each other, a discussion on the needs, interests and expected outcomes of the participants, and the creation of an environment that would foster team building. The purpose of this session was to create a new (shared) purpose and strategic direction for organisation; begin identifying elements of a future organisational conceptual business model that can achieve this purpose; and identify purposeful activities to be pursued after the workshop. The new corporate strategy would, the client stated, need to be responsive to

the insights gained from the comprehensive organisational evaluation so that the organisation could sustain its work and enhance its social impact. (The fact that this was a lot to achieve in this session was pointed out to the client, but she said “the Board wants it this way”.)

Methodology

The methodology used in AR Cycle Two was again expressly declared to be Soft Systems Methodology, with its taken-as-given assumptions, its established processes of inquiry and the elements it uses in the inquiry process. The choice of elements was once again drawn explicitly from the LUMAS model of SSM. This methodology was graphically illustrated in AR Cycle One. The framework of ideas used was based on the original diagram drafted at the end of Chapter Two, in Figure 15.

At the Workshop itself, the researcher’s area of responsibility was facilitation of discussions and maintaining a productive Thinking Environment. Other team members facilitated certain sessions, using their own facilitation techniques. (In other words, only the researcher followed the method outlined in the workshop programme provided below. This created an opportunity for some comparisons regarding perceived facilitation effectiveness to be made by the client, and this is reported later.)

Workshop Programme Outline

For explanatory purposes, the Workshop Programme, as agreed upfront with the client, is highlighted in the programme below.

The researcher was intended to be the lead facilitator, do the opening and closing of each session, but only facilitate certain sessions herself. Following Kline, a key question was set to frame each session. Note that the business model and design thinking elements are not included as part of this thesis so they are not reported on). During the actual intervention however, certain changes were made at the request and insistence of the client. (With hindsight, it was a mistake to depart from our proposed plan.)

WORKSHOP PROGRAMME

Day 1: Duration: 13:00 – 22:00

Session	Key Facilitative Activities	Key question to be explored
1. Welcome and preparing the participants	Grounding and establishing of a Thinking Environment	What sort of environment would be suitable for achieving the outcomes we desire?
	Outline of the structure and process of the workshop	What are the activities that we will be engaged in over the next two days?
	Discussion on identity, purpose and their relevance in coordinating organisational action	What is identity and purpose and why is it important to a discussion on strategy?
2. Exploring the "as-is" through a Causal loop diagram	Presentation of causal loop diagrams and associated narrative developed in workshop with Managers	What is the current situation of concern (as perceived by management) and why might it be this way?
	Group discussion of causal loop contents	What are the views on the current situation and the reasoning for it?
Break		
3. Bringing resolution to possible options	Integrative thinking exercise (Exploration of extreme business model possbilities)	What possible options (Business Models) are there for the organisation, how do these deliver value and what do we love about them?
	Integrative thinking exercise (Exploring the creation of a new business model)	Can we come up with a business model that we love and what might this look like?
Adjourn		

Day Two: Duration – 08h00 – 16h00

Session	Key Facilitative Activities	Key question to be explored
4. Preparing the participants	Grounding and discussion	What is going well?
5. Explore some possible business models	Purpose articulation and discussion on relatedness to business model	What possible purposes can the organisation pursue and how does it relate to the business model we love?
	Sense-making and testing of arising purposes against business model.	What are our thoughts on the purposes available to the organisation?

Propositions made in AR Cycle Two, and key findings in relation to these propositions

In this section, the findings from AR Cycle Two are reported in relation to each proposition that was made before the second cycle of action research commenced. (These are the *same* propositions that were made before the first AR cycle.)

Proposition One: Will establishing and maintaining a Thinking Environment create productive conditions for thinking about the problem situation and lead to the achievement of the desired business results for the session?

It was assumed that creating a "Thinking Environment" that maintained the 'ten components' (as outlined below), would produce the benefits of "both business results and human flourishing" (Argyris & Schön, 1991). It was stated that the intention was that the facilitation would focus on process rather than content. The facilitation aim would be to create the conditions and the process that would enable productive thinking, and the achievement of the desired client outcomes.

In order to create the 'ten components', it was proposed upfront before the session that the following would be done during the workshop (or before, in the case of "place"):

- **Attention**: The facilitator would seek to maintain 'soft' eye contact with each speaker, and request that others do the same.
- **Appreciation**: There would be appreciation "rounds" in which the Facilitator asked participants to appreciate one another. At a minimum, an appreciation round would be done at the end of the first and second day.
- **Ease**: It was asserted that short bursts of quiet time would be used to slow things down. This "quiet time" would take the form of a short 60 second focus on mindful breathing. Participants would also be told that if they notice physiological stress responses in their body, they should focus their attention on their breathing.
- **Equality**: Participants would be told upfront that every participant would be treated as equals during the workshop (regardless of title or position, or whether they were Board members or Managers). A further request made was that in the introductory Round, participants should not mention their "titles and positions" (Most of the group had not met before).
- **Encouragement**: Participants would be encouraged to "go to the unexplored edge of ideas" (Kline, 2010, p. 66) by eliminating competition between thinkers.
- **Feelings**: Attention would be paid to feelings, both the researcher's own and the feelings of others as far as they could be intuited. Appropriate emotional release to restore thinking would be allowed.
- **Information**: Sharing valid information would be encouraged.
- **Incisive Questions**: Workshop sessions would be phrased as questions (See the Programme above for more detail). Questions were asked by the Facilitators at a number of points during the Workshop.

- **Place**: The place showed that the participants mattered. The venue was a lovely hotel next to the sea. Participants could walk on the beach during breaks. Participants also stayed over at the hotel so that we could work late and start again early in the morning. The room would also be set up as an open circle, with participants sitting on chairs, with no tables in front of them (This was also done in the first AR cycle). Participants would also be requested to turn off all electronic equipment between sessions.

Finding One:

In respect to Proposition One, it was found that, overall, the "business results" were achieved by the Workshop. The purpose of the session was to create a shared purpose for the organisation; to identify elements of a conceptual business model that can achieve this purpose, and to identify purposeful activities to be pursued after the workshop. All three outcomes were achieved. A purpose was developed (and the exact wording was fine-tuned by a nominated group who worked separately on this during one of the sessions). The business model was agreed and a new 'style' for the business model was agreed. A list of purposeful activities to be pursued were agreed, with appropriate deadlines and responsibilities allocated to each. All of this was also included in a report written after the session by the facilitators working in association with the CEO.

However, it was difficult to maintain the Thinking Environment for the full two days. There are a number of possible contextual reasons for this:

1. The group size for the strategy workshop was 30 (whereas it was 15 for the first workshop). Kline's (2010) recommendation is that the ideal group size for a Thinking Environment should not exceed 12.

2. In the first workshop, the team was homogenous, but in the second workshop it was a pluralistic group of stakeholders, some of whom held divergent views of the situation.

2. There was considerable conflict during the first few hours of the first day, which had the effect of "dissolving" the Thinking Environment and even affected the Facilitators' resolve to stick to their own process (This is explained in more detail below).

3. The conflict shifted the mood of the group and what was needed was a technique to shift the mood for a large group. Flores' technique offers solutions only for shifting individual moods. (Following the workshop, interesting findings on structural moods and organisational politics was discovered (Spinosa et al., 2014) which offers techniques for transforming mood at a larger scale.)

4. The ‘bad’ mood was contagious and the researcher, as facilitator, had to take a timeout and handed facilitation to the next session to a colleague. She also handed the morning session on the second day to another facilitator. There was a lot of reflection on this decision afterwards in Penzu posts and in emails between the team members, as well as during a meeting that was minuted. A key reason was exhaustion and fear of being confronted again. There was background context to this fear, given certain events that happened whilst the researcher was still at her previous job, that undermined her self-confidence.

The ‘mood’ challenge points to a few challenges with Kline’s method. First, just because Kline says everyone should be treated as thinking equals, information should be shared, and people should encourage and appreciate one another, does not mean that the people will in fact do so. This did not always happen in the group and this highlights that a large burden falls on the facilitator to manage this, which is not always possible in certain contexts. In this context, the key outcome desired was to agree a business model. If the context was specifically set up to explore why people do NOT do these things, it would have been different. Second, the workshop indicates that conflict situations can rapidly “dissolve” the Thinking Environment and make it difficult to re-establish it again from scratch. This suggests that Kline’s method is not well suited to groups of divergent stakeholders. In such cases, the work of Argyris would be more helpful.

Proposition Two: Will there be divisive conflict among group members if the Ten Components of Kline’s Thinking Environment are established and maintained?

Implicitly existing Model I aims such as “Define goals and try to achieve them” and “maximize winning and minimize losing” were expected to exist. It was anticipated that the group would feel a pressure to make decisions and get to action on specifics, such as the findings of a Consultant Report on the organisation. As a result they would find the process disharmonious, because it seeks first to engage in sense-making and the collective generation of a common purpose that would resonate with the group, **before** making any action decisions. It was assumed that at least some participants in the group would have what Kline (2010, p. 239) calls “addictions” to “Control, Urgency and Certainty”. They would find the process, which would seek to replace these qualities with “Respect, Ease and Interest”, to be “torture”. Kline theorises why this might be so as follows:

> *“People craving control, urgency and certainty cannot see what is right in front of them. They mistake Rounds and uninterrupted discussion for lack of spontaneity.*

> *They confuse listening with doing nothing. They are bored where others are engaged and fascinated. They are in withdrawal. The Thinking Environment is torture" (Kline (2010, p. 239).*

Finding Two:

This proposition was found to be true, but only for a few of the Board members from big business and one board member who was a judge. One Board member in particular, L., became highly agitated by the process on a number of occasions on both days. This was observed in behaviour such as sighing loudly, frowning, shifting loudly in her chair, muttering under her breath, making critical comments and attempting to persuade the Chairperson to insist on the process being changed and speeded up so that "we can get to the 'how'".

Proposition Three: Would the Causal Loop Diagrams support the sharing of sense-making about the situation of concern?

It was decided that artefacts prepared during AR Cycle One (the Causal Loop diagrams drawing on the work of Senge by the senior management team), would be shared with the Board members on the first day, in the first session after introductions. The intention what that this would provide the management perspective that they had specifically requested. The other facilitators on the team, who had collated a comprehensive single causal loop diagram comprising all the individual management efforts, as well as an accompanying narrative, would present this. (This decision was not in the scope of decisions made by the researcher. However, the researcher did not apply her mind to who should present it, which with hindsight was a mistake. The management team's anxiety about the Board's reception to it did play into the decision however. Having an 'independent' presenter of this information was favoured by the management team.)

Finding Three:

Using Causal Loop Diagrams as 'rich picture diagrams" to explain the situation of concern, did NOT work. In fact, it was counter-productive, and created conflict and disagreement that derailed the workshop for a while. There are a number of possible reasons for this:

1. The Board members were not involved in making sense of the situation themselves. It is important that sense-making about a problem situation is generated collectively with as many stakeholders as possible. (Checkland does say this, but his assertion to this effect was not noticed until after this finding was made). Having an explanation presented that

was developed by others does not have the same effect as being part of the process yourself.

2. Causal loop diagrams are not the same as rich picture diagrams. Causal loop diagrams attempt to "capture the essence of complex systems", by portraying cause and effect relationships, in a way that emphasizes the highly interconnected nature of the situation of concern. The diagrams seek to show how factors such as growth, workload and service quality can be reinforced or balanced by other factors, and affect the systems as a whole (Senge, 1990). However, the "reader" of the diagram has to THINK and make sense of the diagram and it is not intuitive or simple at first to understand. In addition, unlike SSM's rich pictures, it is not usually hand-drawn. Sophisticated software tools were used in the Workshop Two situation and whilst handouts in paper were given, the diagram was projected onto the wall of the venue using a projector and Powerpoint. (Kline warns against use of Powerpoint unless absolutely essential).
3. The Board members found it very difficult to understand the Casual Loop diagrams and this created disharmony and tension in them. There was a strong reaction to the "academia" (ie the 'learning aspect' of the model.) Comments included "We do not want to hear difficult language;" "Why can't you make it simple?"; "This is not an academic environment, it is a work environment."
4. There was widespread Board disharmony about the "negativity" of the causal loop narrative. They said the problems with the old Board were in the past, and they now wanted to move forward positively. As the findings were perceived to 'blame' the (previous) Board for the problems, there was a strong reaction to this by old and new Board members. As Argyris says, situations that are perceived to be threatening or embarrassing are likely to trigger defensive reactions. This happened. Defenses were triggered. The Board members found the 'findings' of the management team to be negative. They said they wanted to move forward positively (which, it might be argued, was an attempt to bypass the issue of the past and cover up the fact that they were doing so – ie Model I face-saving behaviour.)
5. The situation was exacerbated by the presentation and facilitation style of the session's facilitator (E.). Part of the challenge was his use of judging, critical language. At one point he said, "it is shocking that …" In feedback immediately after the workshop, the client said he had a "preachy" way of using language. E. said he was "making a stand on his being," and he "didn't care if people think he is arrogant; he will argue back." This

translated as defensiveness and was not productive in maintaining a Thinking Environment.

6. Another challenge was an issue of "place". This was the only session in which Powerpoint slides were used. This meant that the "circle" was broken up to make this possible. E. sat behind a table and "preached and intellectualized" (client's words) from there.
7. Checkland (2000) is right. All stakeholders need to be involved as participants in the sense-making process, and even if they are not all present at the same sessions, the drawings must be simple enough to explain the situation to others so that they can resonate with how the problem has been understood. Ideally though, as many stakeholders as possible need to think through the problem together. In fact the sense-making process should have been designed explicitly around Checkland's CATWOE framework, rather than using Senge's Systems Thinking as a tool for sense-making.
8. It was clear that the Board should have been included in the sense-making process from the beginning as many of the Board members were new. Whilst they requested we give them 'the answers', actually they needed to explore the problem too. It may have worked better if we'd designed the first session such that each group (Managagement and Board) could share their perspective or worldviews on the situation of concern with the other group, using a picture to illustrate. With hindsight it is clear the Board should have gone through the same process as management in terms of sensemaking – either alone or apart.

As Sherwood (2003) notes, "Often we learn what is emerging only as we move into action. The key is to act and remain open." This is so true.

Proposition Four: Will the facilitator be able to embody "andragogical" skills of "Being" if the participants turn on her (as facilitator) during the process?

From a facilitation perspective, the aim was to allow group members to solve their own problems. It was hoped that this would enable group members to 'learn how to learn' and how to solve their own problems using productive reasoning and positive ways of being by providing a combination of information (where necessary) and 'allowing' exposure to disharmonious experiences when they arose. (The client and her strategy planning committee were aware that this would be allowed to happen). The view was taken that we wanted to create opportunities for "double loop learning" in the group that happens when unquestioned, commonly accepted "frames of reference" (such as "how strategic planning workshops should be done") are broken. It was expected (based on Argyris' reported case examples) that

this might create dilemmas for participants who are used to 'single loop learning' in which action is taken directly to 'fix' problems, rather than addressing the underlying governing variables which would create tension because it requires confronting your own behaviour.

It was assumed that the group would not want to directly address disharmonies. In other words, Model I behaviours of seeking to minimize negative feelings, helping one another save face, trying to win arguments against another, avoiding looking bad, and trying to bypass embarrassing or threatening situations, were expected to arise. It was expected that participants would not want to break the Model I "frame" that they are used to and would instead turn on the facilitator (by for example, questioning the process or the necessity of doing things in a particular way).

Upfront, there was an explicit intention that if defensive behaviours arose out of the disharmonies created by the "model" of sense-making before engaging in action decisions, then the facilitator would seek to model andragogical skills highlighted by Raelin such as being vulnerable, present, open, tolerant, and non-judgemental. An example of how the researcher actually dealt with disharmony is recorded in the reflection below, but some background context is required: The team comprised five Masters students that had been working together for over a year on another project focused on IT Organising Practices, and had come to work as one unit. The team started facilitating together, which the participants found disorienting. They said "we don't like this tag-team method." The participants also clubbed together "against" the team, and asked the Chairperson to mediate a solution. She requested a change in the facilitation style as well as a change to the programme. As a result, the team stopped tag-teaming and the researcher became "the one lead facilitator" as requested. However, allowing changes to this process, was a mistake as it allowed "control, urgency and certainty" into the process.

A reflection on breakdown that occurred

The following auto-ethnographic account, drawn from the researcher's personal reflection recorded online on journaling software, Penzu.com, gives an example of how the researcher actually dealt with disharmony that arose:

> "In the opening minutes of the second workshop, B. (one of the Board members) directly asked me how often I had facilitated this kind of strategy making process before, and what my own personal credentials were as a facilitator. This instantly

created tension in the room. B's comment undermined his Board Strategy Committee[10] and his fellow board members, who had approved the process and the facilitators. It also triggered exactly the 'worst fears' that the management team had expressed in the first workshop. B. was engaging in Model I behavior, of wanting to win, but did not appear to be aware of it. Earlier he had expressed a concern that there had been conflict in the past and he specifically didn't want there to be any conflict at the session. But in fact, his questions to me created this tension again.

A team member, E., who was sitting next to me, immediately got defensive and began arguing with B. This highlighted the fact that as facilitators we were also not immune from Model I defensive behaviour. As facilitators, our unconscious group response was to seek to win – we became an "us" against "them". Against a background of "conflict" and "perceived failure" the Thinking Environment dissolved. With hindsight, I should have "declared a breakdown in mood' immediately (as Flores suggests) and allowed respondents to reflect on what had happened, realise that their shift in mood was due to negative assessment about the likelihood of a harmonious workshop, and choose to shift that mood. However, my workshop declarations did not include Flores, but chose Argyris' method as a tool to use when defensive reactions were encountered. B's questions created an opportunity to 'make visible' the Model I behaviour, but I was caught short by my own defensive reaction and lost the composure I needed to help the group. I went into a 'flight' response. After the session, E. asked me if I had 'blanked out'[11] for a while after B. asked his questions. On reflecting on this objective assessment afterwards, I recalled feeling as if I had taken a physical blow to my solar plexus, and recalled that I had felt as if I was not in the room, but I did remember that I was trying to think what Argyris would say I should do, and concluded in that time that I must model skills of being vulnerable and being willing to be open and honest, but I also felt shamed and afraid.

Whilst we were warned to expect conflict, and whilst Argyris has found in numerous interventions that participants might 'turn on' or confront the facilitator about the process that was being followed, I did not expect that this confrontation would feel so physiologically and emotionally uncomfortable; nor did I anticipate that criticism from other participants would trigger debilitating self-doubt that undermined my ability to facilitate all the sessions I had planned to facilitate. During the second Action Research cycle, one of the board members, L., muttered loudly in passing, as she got up from her chair to go outside at the break, that I am "the worst facilitator she's ever seen." Later she returned and gave me (unsolicited) negative feedback on the team's performance that was framed as "a contribution to better performance in future." In reflecting on this after the event, I explained how this felt as follows:

"Her comments started to upset me and I got tears in my eyes that I had to pull back with breathing and talking to myself positively. I went to the thought that I am not a

[10] This created significant disharmony in them too and the chairperson expressed anger at what he had done. (He had objected to the strategy committee's decision about what method would be followed at the workshop, we discovered later.)

[11] I experienced 'blanked out' as having 'lost contact' with the room, the fact I was in a room and the fact that there were people in the room. I retreated into my head and was attempting to think through what Argyris had said should be done in such a situation. I experienced a dilemma. Do I react defensively, or do I do what Argyris and Raelin assert, which is to 'be' vulnerable, open and undefensive. I am not sure if I was silent for a long time and this was the reason E. argued back at B., or if E. reacted quickly because it was a 'red flag' for him personally.

good facilitator and I should not be trying to be a facilitator.[12] *Nonetheless, with support from my team, I pulled myself back because we were expected to do a job and I was not going to let the team down or run away from a learning experience. I took some time out and decided to rise to the challenge to be the lead facilitator in charge and not let myself get so affected by criticism."*

The strategy of regaining equanimity and carrying on worked. At the end of the workshop, the CEO's feedback was that "you are a good facilitator. You could see you have facilitated a lot because you can command the room." The vast contrast in the two assessments was interesting to note. Despite the problems, the second AR cycle left me more determined to further fine-tune and expand my emerging framework for intervening in problem situations (which I now also saw as fertile ground for gaining practice at having 'difficult conversations'). I reflected as follows:

"I am not going to give up. I am going to keep learning and keep experimenting. What I learnt from the situation is that I must trust myself. I am a good facilitator and I should not take 'attack' personally."

Findings from Proposition Four:

(1) The participants did in fact turn against the researcher as facilitator (and the other facilitators, including E.) during the presentation of the Causal loop diagrams on the first day.

(2) In practice, it was not easy to model andragogical skills when confronted directly and criticised. It was first necessary to recover from the "stress response" that the tension itself created. The researcher experienced what Kline calls "the fog coming in" (Kline, 2010, p. 79) when her colleague E. got engaged in conflict with one of the Board members, B. The researcher reflected on this afterwards as follows:

"While being blanked out my thinking process was that in facilitation as Argyris does it in moving to Model II behavior, one has to be willing to submit one's thinking to public scrutiny, to be willing to model vulnerability and be willing to learn … and so I silenced my colleague and I shared this thought openly with the group. I also said whilst my ego's desire was to jump to defensiveness and give credentials, this is not the right thing to do so I will not do it, even although I want to. They laughed."

The researcher's openness and willingness to be vulnerable was reasonably effective as a way of responding authentically, but the session was not set up to be teaching Model I and Model II (and was thus not being recorded so it was not possible to play back to B. or to E. what they had said.) It also did not seem appropriate to challenge B. or E. on why they had behaved in the way they had. With hindsight, asking an Incisive Question (such as "What are you assuming that has you make this assessment?", rather than silencing E. or reacting to B.

[12] Austen would call this "over-dramatising" with regards to failure. Austen's advice in this "over-dramatizing" situation is "to simply pay attention" (Austen, 2010, p. 170)

by attempting to respond to his question, would perhaps have been more effective at generating learning.

(3) Interventions need to be framed in advance, in the minds of participants, as opportunities for collaborative learning. Rather than avoid disharmony, we can take the view that breakdowns present a very valuable opportunity for learning about ourselves and about one another. It is not surprising that Argyris, Raelin, Senge and Checkland all highlight that their models involve "learning systems". In the second Action Research cycle it was found to be a limitation that the opportunity for generating learning around why we behave in the way we do, was not framed upfront as one of the objectives of the workshop. (The client said it was "too early" for this.)

(4) The workshop "broke the frame" of how the Board members from established business believe one should 'do' strategy workshops. Board members L. and B. stated that they have run their own strategic planning processes before and they have the knack of it. Their belief was that they knew how strategy workshops 'should' be run (and this was different from how we were doing it.) This made them more rigid and less open to new methods.

(5) The value of Argyris' work was highlighted. Unfortunately it was not possible to use his technique because this was not agreed with the client upfront. It was suggested, but she felt it was to early to try and 'teach smart people to learn' about their defensiveness, which is essentially what Argyris' method is designed to do. The experience highlights the personal level challenge factors, as well as challenges at the interactional level.

(5) It is recognised from the experience that negative moods are contagious. The facilitator and other participants can become affected by them too. There needs to be a tool in the toolkit for shifting the mood. Kline does not include such a tool in her "Thinking Environment." However, Flores does provide a method for shifting mood and as a result of this second AR Cycle, it was felt that his work could have been used more in the sessions. Its value was not appreciated upfront.

In Appendix One, 'what happened' during AR Cycle One and Two is explained in some detail, in an auto-ethnographic way, because it generated new learning for the researcher about the deeper 'why question' related to personal and interpersonal disharmony and breakdown, and led to further interpretive work, which pointed to some directions for further research, which is discussed in Chapter Five. Cloud (2008) makes the observation that: "All

of the loss of power comes from within, not from other people. People lose power over themselves when they give power to others to determine who they are, what they think, what they want, and especially how they feel. They get that power back when they realize that they cannot control what others think, but they can control their own emotional reactions, how these emotions make them feel, their thoughts, their beliefs and their actions."

What these reflections (and other reflections that are available on request) collectively do is cast a beam of light on the skill of facilitation and raise the question as to what would be required to master facilitation in problem situations where there are breakdowns. What emerged from AR Cycle Two is the realisation that facilitation is itself a 'wicked' and 'enigmatic' problem. It has no stopping point. It pushes you past the edge of certainty, and beyond the realm of what you know for certain. Every new insight leads to further insights, and there is no final "there" at which you can stop learning about it. Resolving the 'puzzlement' requires that you get personally involved and bring your own unique sensitivities and judgements into play and embrace, and flow with, the unexpected and the open-ended elements that get thrown at you in real-world situations (Austen, 2010, p. 41, 133). This raises an important question: If facilitation is a 'wicked' problem, and the problem situation is also 'wicked', what qualities does this require in a facilitator?

These questions led to further interpretive thinking using the work of Austen (2010) as a lens, and an energised focus on the 'being' of the facilitator as a more significant and important component in the design than was originally realised.

The challenge of mastering facilitation itself: Austen's Knowledge System Model

Ouspensky (1971) articulates the shift in attention to the self, that happens as you focus your aim, saying:

> *"The determination and definition of aim is a very important moment in the work. It usually happens that one defines one's aim quite rightly, in quite the right direction, only one takes an aim that is very far off. Then, with this aim in view, one begins to learn and to accumulate material. The next time one tries to define aim, one defines it a little differently, finding an aim that is a little nearer; the next time again a little nearer, and so on, until one finds an aim that is quite close – tomorrow or the day after tomorrow. This is really the right way in relation to aims … We must be able to formulate our immediate aim as being able to see oneself. Not even to know oneself (that comes later), but to see oneself. Man is afraid to see himself. But he can decide to take courage and see what he is." (Ouspensky, 1971, p. 256)*

The shift to ‘seeing oneself’ as a human being doing facilitation, led to the realisation that what was being developed was not only ‘conceptual knowledge’ (such as that embodied in the study’s framework of ideas) and ‘experiential knowledge’ (such as the actual experiences of the ‘doing’ of facilitation and interventions to address wicked problems in the regional IT cluster), but also ‘directional knowledge’ (a personal philosophical stance and way of being, complete with ideals and motivations).

Dealing with and reflecting on the situations of concern that emerged in practice (as an Executive Director, cluster coordinator and a facilitator), began to evolve into the development of a ‘personal knowledge system’ to understand more specifically how to *facilitate* interventions to design purposeful action. As a result, after the action research was completed, the possibility was explored that perhaps the Knowledge System Model outlined by Austen (2010), might offer a way to develop ‘mastery’ in *facilitating* in any human activity system where diverse groups of people may want to intentionally generate action.

Austen (2010) developed a model for a Knowledge System to help you organise your learning effort and take a more active role in your own learning (Austen, 2010, p. 133). Her Knowledge System Model works to organise and integrate the knowledge that you use to guide your practice, and direct and inform your own generation of Mastery and Originality, in so doing achieving what Austen calls “Artistry” (Austen, 2010, p. 46). Artistry for Austen (2010, pp. 6-7, 15, 20-22, 46, 91) is an emergent, transformative state and process that cannot be approached directly and needs to be learned. It “is rooted in qualities” (Austen, 2010, p. 15), and it can be closely observed only in the context of a particular medium. It is a “holistic way of being” that can’t be simplified or broken into its parts without generating fragmented distortions (Austen, 2010, p. 89). It comes fluidly and progressively from the inside out. It develops as action unfolds and it can “never be understood in isolation from the medium in which it’s being pursued” (Austen, 2010, p. 7).

According to Austen, to achieve ‘mastery’ in the sphere of your own ‘medium’ requires developing the ‘qualities’ of “recognition, effectiveness, expertise, purpose and focus” (Austen, 2010, p. 112). Mastery is achieved when you get personally involved with qualities and learn to apply developed knowledge (Austen, 2010, pp. 108, 111, 125). As I see it, facilitation is the medium and the elements of my framework of ideas are its mechanics. For Flores, the medium is conversation and speech acts are its mechanics. For Kline, the Thinking Environment is her medium and its mechanics include Incisive Questions and

Thinking Sessions. For Raelin, the medium is facilitation and its mechanics include probing, testing, disclosing, and speaking.

Austen (2010) illustrates her Knowledge System Model and how it generates learning, as follows:

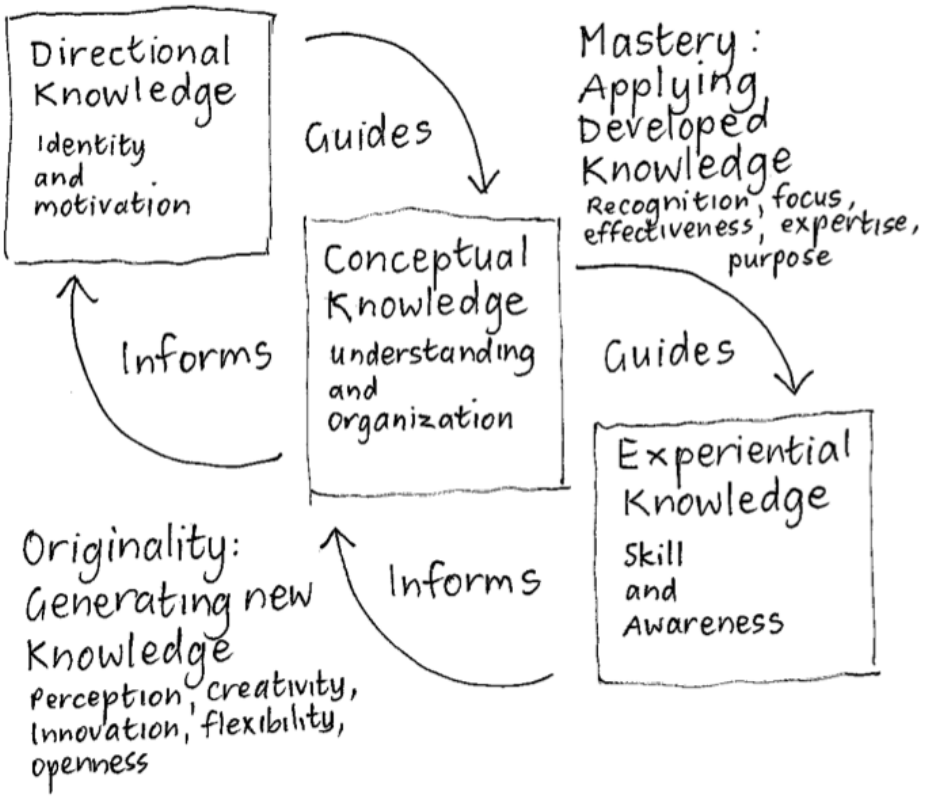

Figure 24 - Austen's Knowledge System Model for Developing Artistry in a Medium (SOURCE: Austen, 2010, p. 51)

Using Austen as a guide, a few extrapolations can be made about the mastery of facilitation in cluster development and in designing purposeful action. These are now stated:

(1) In the case of designing purposeful action, the 'medium' is facilitation of divergent stakeholders. In facilitating, the kinds of *qualities* that can be *recognised* in order to be mastered, include recognising the energy in the room (including personal energy levels), mood (of self and others, which can be observed in body language, sighing, falling asleep, and felt in the body), interconnectedness (as evident in eye contact, engagement levels and body language), ease or urgency (which can be noticed from how people speak – loud, soft, fast, slow, engaged or not engaged); body language, and the state of 'being present' (usually experienced physiologically as a connectedness to breath and an inner quiet and sense of expanded space of the body in the room (in my personal experience)). Awareness of these

qualities, and skill in identifying them, provides you with experiential knowledge. However, actually interpreting them, requires conceptual knowledge. Austen argues that "qualities" are "the elements artists manipulate through reasoning" (Austen, 2010, p. 132). The ability to use qualities is called "qualitative intelligence" or "qualitative reasoning" (Austen, 2010, p.132). In a nutshell, qualitative intelligence requires awareness, an ability to pull things together (unify), and actively work with your medium, in your context, in the present moment. If you can achieve this, new insight can be brought to the "wicked" or enigmatic problem you are dealing with. When you get to the "ah ha" realisation, this generates a feeling of satisfaction and increases motivation to keep working at the puzzle, whilst simultaneously generating possible and unexpected solutions. Austen gives the example of 'attention' and a 'feeling of excitement' as being qualities (Austen, 2010, p. 96). Austen (2010) would probably label Kline's Thinking Environment 'components' such as attention, appreciation, encouragement and ease, as 'qualities'. Similarly, the quality of 'flow' and 'attention' exists in the medium of conversation. Qualities therefore exist in the 'now' and the 'present'. Like Raelin, who sees the need for groundedness in 'Being', Austen (2010) highlights the need to pay attention to what is happening now, in the present moment; and find and connect "feel, focus and immediacy" (Austen, 2010, p.19) with the qualities exhibited by the medium in the moment. She also appreciates 'being' although she rarely refers to the word 'being' specifically in her book.

(2) Mastering facilitation in 'wicked', pluralistic problem situations, demands the development of *expertise* at using your repository of relevant conceptual knowledge. In the case of this study, the framework of ideas that was chosen, forms the researcher's 'Conceptual Knowledge' for intervening to design purposeful action. The concepts in this intellectual repository include Soft Systems Methodology, Systems Dynamics (causal loop modeling), the 'theory of action' perspective, conversations for action and commitment management frameworks, Incisive Questions and Thinking Environment, and the five advanced skills of facilitation as reflective practice; all of which were found to have value at various points during this study.

(3) Mastery also requires creating a sense of *purpose* with regards to your own mission, identity and goals in your own life and in your work of facilitating. This purposefulness generates an internal commitment to act and provides stability that might be needed when acting to overcome the challenges 'wicked' problem situations create. In an email to the author (11 July 2013), Sewchurran notes that "building purposeful systems is not a

mechanistic application of method (such as systems thinking: SSM, systems dynamics, causal loop modeling) but largely sense-making, sense-giving through communicative acts and being very reflexive about what gets triggered inside you as purposes to pursue." The source of this 'purpose' is 'Directional Knowledge'. This Directional Knowledge is developed through "the everyday process of living" (and working) and its elements - "ideals, purposes, identities, directions, paradigms, traditions, and missions", which provide you with "meaning, motivation, focus and orientation" (Austen, 2010. p. 46-47, 77). Purposefulness, it has been argued, is an ongoing, emergent, sense-making activity and process, that requires a willingness to exert effort and struggle with the tensions that will always exist between what is desired and the actual reality. It is sensible to accept this as a fact and work with it, rather than against it. Leveraging this tension creatively (as was attempted in AR Cycle Two) can generate new insights and understanding.

(4) Mastering facilitation necessitates gaining more *effectiveness* at creating the necessary conditions for maintaining or re-establishing Model II environments (such as a Thinking Environment), and intervening when moods shift, thinking becomes unproductive and disharmony and breakdown occurs.

(5) Finally, mastery of facilitation requires an ability to *focus* on staying grounded in 'being with self' – being present, being attentive to your own physiological mood and state changes, being appreciative and encouraging of self and others, and being accepting of the 'thrown-ness' into the situation. The kind of practice that develops this facility is mindfulness practice.

It is declared here that the qualities just mentioned were identified as important qualities to master in designing purposeful action, during the two years in which this problem was pursued with reflective attention. In saying this, it is key to note that Austen's Knowledge System is "personal". You apply it to yourself and your own experience. It is a person-centred model designed to help you take more responsibility for your own learning and drive your own path towards artistic practice (Austen, 2010, p. 51). That said, Austen (2010) also claims that developing a knowledge system can provide researchers with a method for modelling or understanding the makeup of the Knowledge system of individual 'artists' such as facilitators and cluster coordinators. Martin (2007, p. 104) makes the following pertinent comments about personal knowledge systems:

> *"Personal knowledge systems are highly path-dependent. When a person starts in a given direction, that direction is likely to be reinforced and amplified, not diminished or altered. This can happen for good or bad; that is, the spiral could be beneficial or detrimental. Operating at their best, the three elements of the personal knowledge system will reinforce each other to produce an ever-increasing capacity for integrative thinking. By the same token, though, stance, tools, and experience can conspire to trap perfectly intelligent and capable people in a world where problems seem too hard to solve and mere survival is the only goal … Neither spiral is foreordained. Your personal knowledge system is under your control … As long as you can change your stance, you can change the tools and experiences you use to develop your thinking capacity – especially your integrative thinking capacity" (Martin, 2007, p. 104)*

Austen-Johnson (2007) says that artistry is not developed while sitting in a chair or reading a book. It is developed by participating actively in a discipline whilst action in that discipline is unfolding. It is only by taking action that we can generate knowledge through the flux of time.

Similarly, it is only by 'getting your hands dirty' in actually facilitating the design of purposeful action in the real-world that you can generate knowledge and experience. There are three categories of knowledge we need, she says. These are experiential, conceptual and directional knowledge (Austen-Johnson, 2007; Austen, 2010).[13] These will now be explained in more detail as they provide direction for the development of a "knowledge system" for facilitators who are designing purposeful action.

Experiential knowledge comprises "know-how, skills, sensitivities, feel, intuition, techniques, methods, expression, and awareness" that allow you to produce results in your world (Austen, 2010, p. 46-47). It is a more direct, personal, hands-on type of knowledge and is composed of two elements, *awareness* and *skill* (Austen, 2010, p.59, 65). To acquire it you need to do the following: First, immerse yourself into the qualities of your medium, so that you increase your awareness of them. Then, having become aware, use your skill (in responsive flow rather than using a template-type method) to create and manipulate these qualities; and finally, you must make an effort to intensely search and actively work to integrate, align and unite awareness and skill together in the territory of your medium, so that thinking can happen about the qualities embodied in mastery of your medium itself.

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[13] Martin (2007, p. 92, 93, 97, 99, 100) uses the terms "stance, tools and experiences" for referring to the personal knowledge system of 'directional, conceptual and experiential knowledge'. He defines 'stance' as who you are (including your temperament) and what you want to accomplish in the world. Stance (i.e. directional knowledge) guides you in making sense of the world around you and taking action on that sense-making. Tools are what you use to organise your thinking and understand your world. Experiences are where stance and tools meet the world and they help you hone your "sensitivities" and your skills.

Through the auto-ethnographic reflections, I recognised that the qualities I worked with as a cluster coordinator included being passionate and enthusiastic, pattern sensing, building trust, listening for what is not said, and facilitating authentically. The salient elements that I found to be important in designing purposeful action in this study, included inviting the right people and as many of the stakeholders as possible; making sure all the people invited are briefed beforehand about expectations from the meeting and why they are being invited (i.e. I shared valid information); allowing everyone time to speak; creating a good listening environment in which people feel their thinking and being is respected; making the sharing of perspectives openly a key area of focus; and ensuring that people have the freedom to disagree or have alternative views, because without this freedom of choice they will not generate the internal commitment required to take action

As Austen says (2010, p. 63), experiential knowledge is achieved "when work becomes a … *way of being* that is difficult to reduce to words." In this study, experiential knowledge was gained from both intervening as a cluster coordinator in real world projects (which included generating purposeful action among industry, academia and government to create a series of unique new skills development post-graduate training and internship programmes), as well as experiences facilitating a change management programme internally to merge two organisations together, and experiences facilitating the two workshops that are reported in this study.

Austen (2010) believes that developing 'Conceptual Knowledge' is critical if one wants to learn from experience(s). When this study was started, I did not have any conceptual knowledge. I worked with passion for the cause and just doing and made a lot of mistakes and learned hard lessons from them. Conceptual Knowledge is a form of interpretative knowledge that helps you organise and assess what you do and feel as you take action. As such, it provides you with sense-making devices that allow you to imagine how your actions will shape your medium, understand what you encounter, and then evaluate what you produce as you work. Conceptual knowledge can include heuristics, models, and theories (Austen, 2010, pp. 66, 139). It requires analytical, abstract mental work. This means it is less emotionally draining or physically taxing than the other two knowledge types (Austen, 2010, p. 139). Other advantages are that it is more easily shared with others and can help you to extrapolate complex Experiential Knowledge into models that enable you to make sense of complexity (Austen, 2010, p. 69). The framework of ideas that was developed emerged as conceptual knowledge during this study. The process of thinking and reflecting on what was

being experienced in practice, using the theoretical frameworks as lenses with which to interpret and respond to what had happened, guided the experiential knowledge (i.e. awareness and skills) I was building. In addition, what was experienced causes a personal resonance towards certain conceptual knowledge and a search for new conceptual knowledge.

Directional knowledge includes the purposes and motivations that guide and direct your conceptual knowledge. Austen (2010) sees Directional Knowledge as being closest to your personal identity and what pulls, energises and inspires you. Directional Knowledge is developed through "the everyday process of living" and creates enormous opportunity for variety. Its elements – "ideals, purposes, identities, directions, paradigms, traditions, and missions" – are drawn from an entangled net of influences that could include our city, the people who live and work around you, the events that you experience, and the meaning-making that you give to all these influences (Austen, 2010, p. 46-47, 77). In this study, my directional knowledge was informed in part by the philosophical paradigm that has been described. This influenced how I chose concepts, and the concepts that were selected developed and guided an evolving sense of a new identity as I started to see "a way through" the breakdowns and failures.

Austen argues that for the Knowledge System to work like a well-oiled machine, you have to develop useful knowledge in all three knowledge types (Austen, 2010, p. 133). If there is lopsided practice or knowledge development, it is harder to sustain the tension between mastery and originality, and artistry can be crushed by disappointment, failure and other challenges (Austen, 2010, p. 136).

I can state very certainly that the action research process that was followed, was in fact marked by such a lopsided Knowledge System. The study's framework of ideas did not accommodate for my own directional knowledge (which was not sufficiently developed), nor did it accommodate for issues of instinctual, experiential 'control' of my own physical being under stress conditions.

As has thus been argued, it is evident that a personal knowledge system was not only developed during the study, but also that having a personal knowledge system is helpful when intervening to facilitate the generation of purposeful action. Thus it emerged that there were many good reasons to include the Knowledge System Model within the framework of ideas proposed in this study, and a revision made to the researcher's framework of ideas for designing purposeful action. This is illustrated in Chapter Five.

Summary

This chapter described two cycles of action research that were conducted in single intervention in which the researcher designed and facilitated a process for generating a shared purpose and strategic action steps, using SSM's LUMAS model and a conceptual framework for intervening that was developed in an earlier interpretive research phase. As part of this action research process, four propositions were made that related to the intellectual framework used and the following findings were made in regard to these in the example in which 'action to intervene' in the social housing NGO's problem situation was undertaken:

- Establishing and maintaining a Thinking Environment can create productive conditions for thinking about the problem situation and can lead to the achievement of desired business outcomes for an intervention.
- There is less (if any) divisive conflict among divergent stakeholders, or between participants and the facilitators, when there is a Thinking Environment 'working'.
- Causal Loop Diagrams can generate sense-making about the situation of concern, but as many stakeholders as possible must be part of this process. Presenting causal loop diagrams as conclusions to participants who are not part of the process of generating these diagrams, does not work as a method for generating a shared sense of purpose (at least not in this case).
- As a facilitator, it is very difficult in practice to embody skills of 'being' when the participants turn on you (as facilitator) during the process. This difficulty exists even if the facilitator expects to be confronted in advance of it happening. There are human instinctual stress responses at play that must be mastered.

This chapter also explored the possibility of adding a personal knowledge system, complete with directional, conceptual and experiential knowledge, to the frameowrk of ideas, and it was concluded that this would be a valuable addition from the perspective of the requirement to master facilitation skills.

In reflecting on the results of the two action research cycles afterwards, the question as to why there was conflict and disharmony in the second AR cycle but not in the first AR cycle, led to significantly more reflection. Kofman and Senge (2001, p. 20) assert that "people *reason differently* when they think about a problem simply to understand it than when they intend to take action." In the first AR cycle the key focus was on **understanding** the problem situation (of the past). In the second AR cycle there was a clear intention that there should be

action out of the Strategy Process intervention (in the present – action steps actually agreed). This 'drive' for action may have been the reason.

It is also possible that the fact that the second group was larger and more pluralistic than the first played a role. It was speculated further that most of the participants probably held a Model I theory-in-use that might explain their defensiveness (although this was not tested.) Nonetheless, although *thinking* was clearly an issue, on balance, it just did not seem true that "different reasoning" alone was the primary reason for the breakdowns. Strong feelings had emerged. The role of feeling, it was felt, simply could not be ignored but the researcher's conceptual model paid only scant attention to it.

Chapter Five explores this challenge as a direction for future research.

Chapter 5: Conclusion, reflections and suggestions for further research

This chapter begins by recovering the memory of what the 'whole' study originally set out to investigate. It then reflects on disharmonies that emerged after the action research was completed, that related to the conceptual framework of ideas that was developed in the interpretive phase. Attention is then drawn further to what conceptual and experiential knowledge was produced during the interpretive and action research phases of the study, and how this was informed by the researcher's personal philosophical stance (i.e. directional knowledge). Finally, a direction for future research is suggested. The chapter concludes that facilitating purposeful action requires paying attention to both "being" as well as "doing" (and hence the call for a "being-doing" approach to facilitation in pluralistic contexts).

Recovering the memory of the whole

This thesis asserted at the outset that getting divergent stakeholders to undertake action to improve a shared situation of concern (such as skills shortages) is a wicked problem. Industry, government and academia operate in siloes, make decisions at different speeds, have disparate worldviews and value sets, and do not share the same priorities and concerns. It was argued that whilst meetings between these stakeholders are not uncommon, progressing these conversations beyond 'talk' to achieve commitment to act, requires purposeful effort; hence, the recognized need for cluster coordinators who can orchestrate collaborative action amongst these stakeholders. However, the cluster development literature does not offer solutions as to how to design purposeful action, nor does it offer insight as to why attempts to intervene in systemic problems so often results in breakdown and a failure to improve the problem situation.

In thinking about why this issue of how to design purposeful action among divergent stakeholders was such a persistent problem, it was speculated that perhaps there was 'something missing,' either in the process of intervening that was being used, or in the thinking together about the problem, or in the way in which the interventions themselves were being facilitated. Through an initial auto-ethnographic interpretive research phase, a set of relevant theoretical contributions was selected, based on their presupposed ability to assist

with answering five questions that were posed upfront. These questions and the relevant theoretical contributions are summarized in Table 11.

Table 11 - Summary of the research problem, key research questions and the theoretical framework of ideas that was selected for this study.

The study's persistent and relevant problem	The speculated "something missing" and related questions (research themes)	Framework of conceptual ideas
How to design purposeful action among divergent stakeholders? *(ie. How to get diverse groups of people to think together about complex 'wicked' problems in such a way that the most feasible action to address the problem becomes apparent to everyone, and leads to purposeful, committed action to improve the situation of shared concern).*	*There may be something missing in the process of intervening that is being followed* **Question#1**. What structural "design" components should be included in an intervention to achieve the outcome of "*purposeful* action"?	*Core design structure*: • SSM's 'Purposeful activity models' (LUMAS model) for sense-making in a problem situation *plus* • Applied systems thinking: Systemic process of inquiry and using models of purposeful activity to structure debate (Checkland); and Systems dynamics (causal loop modelling) (Senge) • Thinking Environment, Limiting assumptions and Incisive Questions (Kline) • Commitments made in speech acts in conversations for action; Trust; Managing mood "as an assessment about the future" (Flores) • Theory of action perspective; Productive reasoning and sharing valid information; Defensive routines, revealing dilemmas, uncovering 'Theory- in-use', 'Model I and Model II' (Argyris & Schön) • Advanced skills of facilitation as reflective practice (Raelin)
	There may be something missing in the way in which stakeholders think about the problem together **Question #2**: As a facilitator, how do you ensure that the quality of thinking about complex problem situations is productive (i.e. opens up possibilities for action)	
	There may be something missing in the way in which the interventions are being facilitated – Three Questions: **Question #3**: How do you generate the commitment that is necessary to unlock purposeful action, especially when the problem situation is 'wicked' and the problem owner is ambiguous and unclear? **Question #4**: How do you prevent conversations to design purposeful action from being undermined by defensive behaviours and bad moods? **Question #5**: Why is the process of facilitating interventions to design purposeful action leading to so much personal and interpersonal disharmony and breakdown?	

In the process of reflecting on the relevance of these theoretical contributions, a 'conceptual bridge' for using these contributions in a single framework for intervention as a facilitator (or a cluster coordinator) in a wicked problem situation, was sketched out before the Action Research began. It was presented as a possible 'answer' to the question (#1): *What structural "design" components should be included in an intervention to achieve the outcome of "purposeful action"?* The original 'design' at the stage it was at when the interpretive Phase One of the research was completed, is repeated in Figure 25:

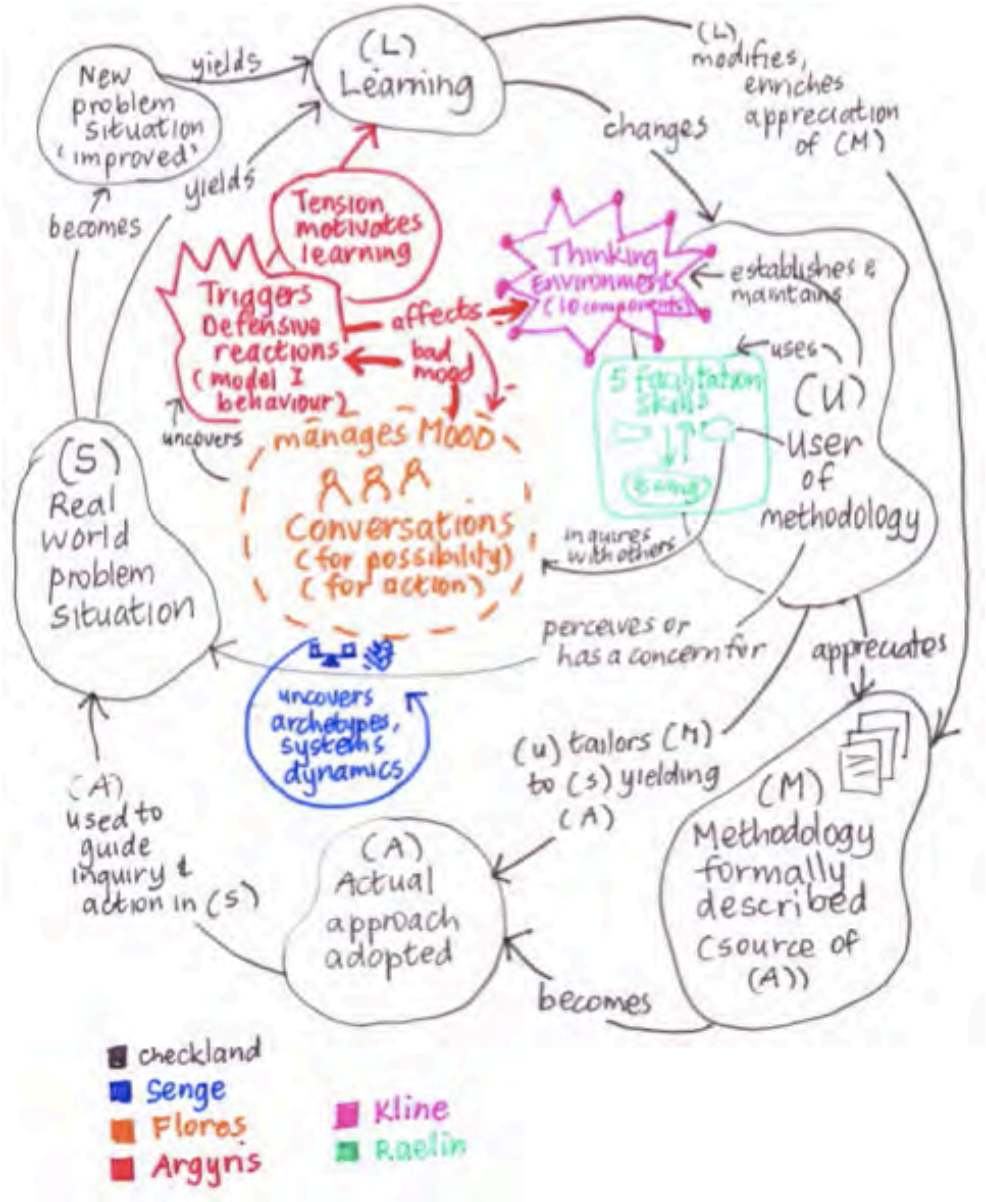

Figure 25 – Researcher's 'design' of a framework for intervening as a facilitator to design purposeful action among divergent stakeholders, as it looked at the end of the interpretive research phase. This framework of ideas was also declared upfront before the action research study that was conducted.

This rough ‘design’ for intervening provided the ‘conceptual knowledge’ that guided the actions that were taken in the study. This framework was tested out in two action experiments that were conducted within a single case study. In the case example described, the purposeful action that needed to be designed was an intervention to get divergent Board members and managers of a social housing organisation, to create a common purpose statement and agree strategic action steps. Before each action research cycle, in line with the requirements for being able to claim to be using Soft Systems Methodology, the framework of ideas and methodology that would be used was declared. In addition, specific propositions related to concepts (such as Kline’s Thinking Environment) that seemed to hold an answer to the ‘something missing’ problem were made, and also explored during the AR cycles.

The key findings from the AR Cycles were reported in Chapter Four. After the Action Research cycles were completed there was extensive further reflection about the possibility of including a ‘personal knowledge system’ as part of the framework of ideas. This was also discussed in Chapter Four. What remains now is to highlight some threads that still remain intriguing, and then pull together a final version of the framework of ideas, before suggesting some directions for future research.

Kline’s Thinking Environment has merit

Flores’ practice for shifting moods and Argyris’ practices for shifting from Model I to Model II acknowledge, in a limited way, the problems presented by feelings. Kline goes further and actually includes “feelings” as one of her ten components of a Thinking Environment. Unfortunately this study could not test, in a real-world cluster coordination situation, whether or not being confrontational and direct, and holding people explicitly to their commitments (as Argyris and Flores would do), is more effective in generating productive reasoning and achieving business outcomes, than methods that seek instead to obtain ‘natural’ commitment that flows from sharing our own understanding of the problem (such as Checkland and Kline’s models do). Argyris and Schön (1996) make it very clear that it is rare to find people who are willing and able to confront and overcome their own defensive patterns of thought and action and engage in Model II behaviour. With this in mind, is it not more pragmatic to use a method (such as Kline’s) that supports and encourages Model II ways of behaving without requiring that the facilitator must “change” people in order to get them to cooperate with one another?

Unlike Argyris' method that not only requires participants to be willing to confront their own behavior (which Argyris himself acknowledges most people are not willing to do), but also requires training in identifying Model I behavior to be given, Kline's method can be incorporated into any intervention 'naturally' without any fuss or explanation required. When used well, conflict either does not arise at all or the differing viewpoints can be discussed openly. I would argue that this is because her method *is* Model II because it enables the sharing of valid information (and Argyris argues that sharing valid information is a key requirement for shifting people out of automatic, unconscious defensive habits). A Thinking Environment enables the creation of Model II conditions in which people are willing to share valid information (and are therefore more likely to be able to make free and informed choices that generate internal commitment), and leads to minimally defensive interpersonal relationships and group dynamics (as was found in the research). It also provides a 'safe' environment within which to allow the expression of appropriate feelings. The experiences of the action research cycles indicates that setting up and maintaining Kline's Thinking Environment definitely holds promise as a mechanism for creating a Model II way of being and doing, because its ten components and its practice of giving everyone equal turns to speak without being interrupted, allows for the giving and sharing of valid information as a practice that managers can include in their meetings and teams can develop as a skill and a regular practice. However, it has value as a 'container' but it is not enough by itself to generate purposeful action.

Is this a framework for a "happier Model I world" instead of a Model II world?

> *"To learn from our decisions and their consequences, we must be explicit in advance about the thought process preceeding the decision. For better and for worse, the mind has an almost infinite capacity for rationalizing after the fact. If things don't go the way we hoped they would, we are capable of totally forgetting the thoughts that led to our decision. Instead, we tell ourselves that the unanticipated outcome is, in fact, what we expected all along." (Martin, 2007, p. 130)*

The SSM requirement that the framework of ideas and methodology must be declared explicitly upfront meant that it was quite easy (but also an uncomfortable experience) to recognise findings that were unexpected. Without really realising it at the time, selecting Kline's Thinking Environment was in effect an attempt to create a Model II world in which people share valid information in an non-defensive environment of appreciation and respect and positive philosophical choice. In selecting Flores' commitment management and

conversations for action framework, there was an attempt to establish the Model II qualities of making the kinds of free and informed choices that generate the internal commitment that is required to take purposeful action to improve situations of concern. In identifying the value of Raelin's quality of 'being' and the need for mindfulness, there was a recognition that as a facilitator you need to be authentically present and curious, and retain an awareness of your self within the 'whole' process as it is unfolding.

Nonetheless, I had a nagging suspicion that what I had actually done was merely create a "happier Model I world". My conceptual framework had an inordinate focus on 'thinking' and 'understanding' and 'sense making' and as such focused on the Model I governing variable of emphasizing rationality. In addition, like Model I, my intellectual framework had a goal – achieve the purpose of finding out why there is disharmony and breakdown so you can avoid it happening. I was seeking to avoid potentially threatening or embarrassing situations that might occur if there was conflict, by being very fixated on using Kline's work to avoid conflict from arising in the first place, so that I would not have to deal with defensive reactions. In this way, I was suppressing negative feelings and seeking to exert control over the environment. My conceptual framework had an 'espoused theory' of achieving a Model II environment and a philosophical paradigm that included Heidegger's perspectives on "thrown-ness" but I had failed to see my own Model I behaviour and how my Model I worldview had played out in my own conceptual framework. The process that was followed in making these deductions, required reflecting on the experiential knowledge gained in the action experiments, and using this to inform the conceptual knowledge that was developed in the form of a framework of ideas for how to intervene to design purposeful action. This highlights again the value of including Austen's Knowledge System model framework, as was discussed at the end of Chapter Four, in a conceptual framework for intervening in wicked problem situations.

Dealing with disharmonies and mindfulness practice

The study has foregrounded the question of "Why should the disharmony be explored?" A desire to understand why disharmony occurs in conversations and interventions to design purposeful action was a key force motivating personal learning during this study. Stone, Patton, and Heen (2000) state that there are three identity issues which commonly arise for most people during 'difficult conversations'. These are: Am I competent? Am I a good person? and Am I worthy of love? When these issues are triggered, who we thought we were

when we walked into the conversation is called into question and we can be knocked off balance and feel disempowered in the situation.[14] This can cause physiological stress responses, such as 'fight or flight'. In experiencing the physiological response of a direct and potentially embarrassing threat, I appreciated anew why Stone et al. (2000, p. 112) say that:

> *"Some conversations can be … overwhelmingly difficult. Our anxiety results not just from having to face the other person, but from having to face ourselves. The conversation has the potential to disrupt our sense of who we are in the world, or to highlight what we hope we are but fear we are not. The conversation poses a threat to our identity – the story we tell ourselves about ourselves – and having our identity threatened can be profoundly disturbing." Stone et al. (2000)*

This points very strongly to the need for a facilitator to have a very clear and strong sense of their own identity and what motivates and inspires them to do the work they do. Austen (2010) uses the concept of "Directional Knowledge" to refer to the internally generated notions we have about our identity and purpose, which motivate us and drive us forward in our work.

In reflecting after the strategy Workshop, I made the following statement:

> *"It would be so amazing if one day I can face a challenge like that, in a situation of direct assault on my weak areas, and remain completely unaffected emotionally or physiologically. I think I would have to be in a place that is incredibly accepting of myself, and I would have to be able to completely let go of any "ego" or power issues – how I look, how old I am, how white I am, how frail I am, how low my energy is, how disempowered I feel, how unknowledgeable I am, etc. On the positive side, the experience has made me more determined to do more mindfulness training."*

The physiological experience of dealing with confrontation, combined with the in-body experience that it was extremely difficult to maintain (and regain) a calm and composed state in the face of criticism, motivated me to get experiential practice at maintaining a calm physical state. I became aware in a completely new way that facilitating in complex situations required mental equanimity and an ability to bounce back quickly from physiological fight or flight stress responses. (Stress responses can trigger withdrawing to avoid the negative sensations (which I did by not facilitating sessions I had planned to facilitate), getting angry

[14] Senge et al. (2006, pp. 10-11) argue that "all learning integrates thinking and doing … what differs is the depth of awareness and the consequent source of action." They take the view that actions will be reactive if awareness never penetrates beyond the surface of events. It is only if we seek to see, and see ourselves as part of the greater wholes that generate 'what is' happening in the present, that we can become capable of deeper levels of learning.

(as my colleague did) or upset (as I did), or having judgemental thoughts (which we all did, as a team.))

In an attempt to gain such experience, I put myself through a silent Vipassana meditation course during June 2014. During the ten day course I spent 120 hours sitting in a cross-legged position practising 'mindfulness'[15] by putting attention on natural respiration and noticing normal bodily sensations (such as itching, heat, tingling, etc). The physical discomfort created by sitting still, created an opportunity to practice maintaining an even, composed, 'equanamous' mind despite painful experiences. Vipassana means 'insight' in the ancient Pali language of India. The practice is based on the insight that in broad, overall terms, the mind consists of four processes. First, the receiving part of the mind becomes aware in an undifferentiated way (consciousness); then there is a recognising of whatever has been noted by the consciousness (perception); followed by a signal that something has happened, that is perceived to be pleasant or unpleasant (sensation); and finally, there is a reaction. If the sensation is pleasant, we start liking it and wanting more. If the sensation is unpleasant, we dislike it and wants it to stop. The course teaches that states of liking and disliking are constantly arising and falling away and are not permanent. Suffering is caused by our mental reaction. If we stop reacting, suffering stops too, it is argued (Hart, 2004, p. 37). Vipassana teaches that:

> *"Suffering is the inordinate attachment that each one of us has developed towards this body and this mind, with its cognitions, perceptions, sensations and reactions. People cling strongly to their identity – their mental and physical being – when actually there are only evolving processes. This clinging to an unreal idea of oneself, to something that in fact is constantly changing, is suffering" (Hart, 2004)*

In the quote above, Hart (2004) brings attention to the fact that identity issues, such as clinging to a particular identity (such as "being a good facilitator") can cause suffering. If however one can appreciate that "being a facilitator" is a process of flow and one may be effective in one moment and ineffective in another, the experience of facilitating might be much less stressful. What is important is to become aware of what one is doing, and how one is being-in-the-doing, in the situation as it evolves from moment to moment. Osho (2013) says:

[15] My previous experience of "mindfulness" was only through reading about it. The Vipassana experience led to the recognition that asking participants to close their eyes and spend one minute focusing on their breathing is not "mindfulness." However, focus on breath does contribute to a mood of "ease" by slowing things down.

> *"Awareness … does not really arise in you, you are not a doer of it. It arises in the total context: the situation, you and all that are involved in it. Out of that wholeness the act is born – it is not your act. You have not decided to do it that way; it is not your decision, it is not your thought, it is not your character. You are not doing it, you are only allowing it to happen." (Osho, 2013, pp. 82-83).*

The Vipassana experience taught me how to notice physiological sensations in my body and use this to help reduce my reactivity to situations I found painful or uncomfortable. I recognised that desiring positive, affirming, harmonious workshop experiences ("craving") and wanting to avoid negative, critical, conflictual facilitation experiences ("aversion") creates misery. It is not possible to totally control situations so that they can be positive rather than negative. A facilitator, I realised, will always be 'thrown' into situations, as Heidegger proposes, and must develop the "capacity to see and work with the flow of life as a system" (Kofman & Senge, 2001, p. 20).

After the Vipassana retreat, I re-examined the conceptual design for intervening to create purposeful action and noticed a profound dissatisfaction with its 'busyness'. It felt like an over-anxious attempt to pull together as many tools as possible to ensure a 'perfect' ability to deal with as many 'curved balls' as the complex, volatile world could create. I realised too that 'mindfulness' needed to be included in the framework of ideas. Although the concept of mindfulness has not been developed in this thesis, and although the Vipassana experience came late in the research process, it is considered important to include mention of the Vipassana experience for the reasons given above.

With all these points in mind, there are modifications that I would make to the framework of ideas before conducting further action research, but first a few conclusions about the conceptual framework as a 'design' for purposeful action.

Revisiting the framework of ideas as a 'design' for purposeful action

In returning to the original design structure proposed at the end of Chapter Two, and illustrated again in Figure 25, seven conclusions about this framework of ideas as a solution to the problem of "how to design purposeful action among divergent stakeholders" can be made here.

First, it was found that the study's framework of ideas provides a relevant bouquet of theoretical lenses and tools that were found to be helpful when attempting to get divergent stakeholders to commit to generate purposeful action to undertake collectively.

Second, SSM provides a solid structural design for intervening [16] among divergent stakeholders as an action researcher, a cluster coordinator or a facilitator. It provides a method for an organised effort to achieve the shared understanding that is required as a precursory step to taking action. It has, over the 30 years of its development, considered a large variety of possible challenges that might arise in applying it in practice, and adapted the model to accommodate for these challenges experienced in the real-world of practice. Relooking the 'design' provided at the end of Chapter Two and again in Figure 25, it is evident that the design itself - in terms of a plan as to how to design purposeful action, can be seen with hindsight to be very close to an action research process, as AR is done in SSM. In other words, action research done in an SSM way, provides a framework for designing purposeful action among divergent stakeholders. (This was not obvious upfront, so this was a revelation.) In this study's 'design' (as was done in the example in which the researcher intervened), the structure, as derived from SSM, is this: First, you declare upfront what the repertoire of useful concepts and ideas are that you will draw on, and what your methodology for designing the action will be, and then you undertake action in the situation, in an attempt to learn and improve things. Thereafter you reflect on your findings and use your findings to inform alterations to the framework of ideas.

Third, the co-creation role of the participants needs more recognition in the design. Action research (SSM-style) gives a primary role to the "user" (i.e. the researcher-facilitator) as driver of the design of purposeful action and does not include the participants in its intervention diagrams. This is, in my opinion, an oversight. All the stakeholders need to be included 'inside' the model as equal thinking partners and co-creators of the ultimate result, because 'what happens' is co-created and the facilitator has very little real control. It would be very interesting to do further research that incorporates Kline's Thinking Environment consciously within SSM's process of inquiry into problem situations.

Fourth, whilst Senge's causal loop modeling process is useful, it focuses on 'what's wrong' and closes off opportunity to 'reframe' the positives. It would be better, from the perspective of designing positive action, to invert the feedback loops in the opposite direction to show what is possible, rather than what is wrong. Alternately, it would be interesting to find a way

[16] This should not have been a surprising finding given that Soft Systems Methodology (SSM) evolved out of an aim "to find ways of understanding and coping with the perplexing difficulties of taking action, both individually and in groups, to 'improve' the situation which day-to-day life continuously creates and continually changes" (Checkland, 2000, p. s12).

to draw the causal loops as questions, not as statements (following Kline who proposes that the mind thinks best in the form of questions.)

Fifth, ‘conversations’ are a central mechanism through which a sense of purposefulness is generated, commitments are made, conflict is resolved, moods are shifted and action is agreed. The study’s combined construction does not appreciate the key role of conversation sufficiently.

Sixth, the Thinking Environment was found to be a powerful tool that provides the enabling components necessary for thinking and being together in a way that enables conversations for possibility and for action to be productive and generate positive outcomes. It also helps create a positive and nurturing mood. When it works, it feels good to be part of a Thinking Environment. However, the Thinking Environment is fragile and collapses in the presence of defensive, reactive behaviour and threatening situations. Feelings emerge in conversations. Feelings arise when threatening or potentially embarrassing situations are encountered. Feelings can quickly get out of control if not contained properly and derail conversations. The model needs to acknowledge feelings in some way that enables the facilitator to allow but also contain them. None of the models are helpful in this regard (and interestingly, all the theorists point to feelings being important, but none of them are truly brave enough to embrace feelings as a vital part of the process of sense-making in their models).

Finally, the facilitator’s own ‘state of being’ and ability to control their own stress responses, and create and maintain this Thinking Environment, can affect the outcome, positively or negatively. Facilitators need to master their own instinctual responses and develop a strong sense of identity that can overcome confrontational threats to their methods. Mindfulness practice was found to be personally helpful and could help with this.

After considering all these factors, as well as the work of Austen (2010) that was explained in Chapter Four, the conceptual framework for a design to help cluster coordinators and facilitators to generate commitment to undertake purposeful action among divergent stakeholders, was modified.

As is evident from Figure 26, the key changes that were made are:

(1) the addition of the stakeholders / participants within the model;

(2) the incorporation of mindfulness as a practice for the facilitator;

(3) the inclusion of mood as a factor that the facilitator must manage;

(4) the location of conversations for possibility and for action in a central position;

(5) drawing the Thinking Environment as a ‘container’ around the conversations that are conducted, and

(6) the recognition that a ‘personal knowledge system’ informed by learning gained through the interaction of personal direction, relevant concepts, and experience, is needed to master the facilitation of sense-making and action in the situations in which you are ‘thrown’ as a cluster coordinator or facilitator.

The revised model that is provided as a conclusion regarding the study’s ‘conceptual knowledge’ can now be illustrated in Figure 26:

Figure 26 - Researchers' final construction of a possible framework of ideas for intervening to design purposeful action among divergent stakeholders

Directions for future research

There was however still a final puzzlement that was still unresolved after all the conclusions and model adjustments were made. It was felt, and this is still a 'gut feeling,' that thinking, feeling and being doesn't only occur inside (of the human beings called 'user of the methodology', or researcher-facilitator, or cluster coordinator and the other stakeholder participants). There is something (that I can't define) that allows thinking, feeling and being to also be present *between* the people and the real magic lies in this indefinable, ineffable 'in-between' space. What showed up in the action research was not only my own 'being' but also feelings (my own and those of others) and these seemed to have an effect on the system as a whole.

The fact is that the conceptual framework declared before the action research, did not have a way of explicitly recognizing the interrelatedness of thinking, feeling and being. Both Kline and Raelin point to the importance of 'being' as an advanced skill required in a facilitator. However, neither of them link 'feeling' and 'being' to a system's perspective. In undertaking further interpretive work, it was found that Kathia Laszlo (2012) does make this connection. Her work offers a way to link the systems-based ideas of Senge and Checkland, and the theory of action perspective of Argyris, with the concepts of 'being' and 'feeling'.

Laszlo (2012) extends systems thinking into the realm of 'systems feeling', and argues that both systems thinking and systems feeling "can be useful approaches to describe and understand complexity" (Laszlo, 2012, p. 100). Furthermore, taking actions to "create more of what is good and to change what can be improved," becomes possible when thinking and feeling includes a "systemic appreciation." This is because the process of thinking systemically leads people to see interconnections, and seeing interconnections *generates* emotions and feelings in people. This emotionality increases people's ability to translate systems ideas into actions. This taking of action to 'create' and 'change' what needs improving, Laszlo calls "systems willing". 'Systems willing' is accomplished through "systems design" which she defines as "a disciplined and collaborative future-creating enquiry" (Laszlo, 2012, p. 100). This can be illustrated diagrammatically as follows:

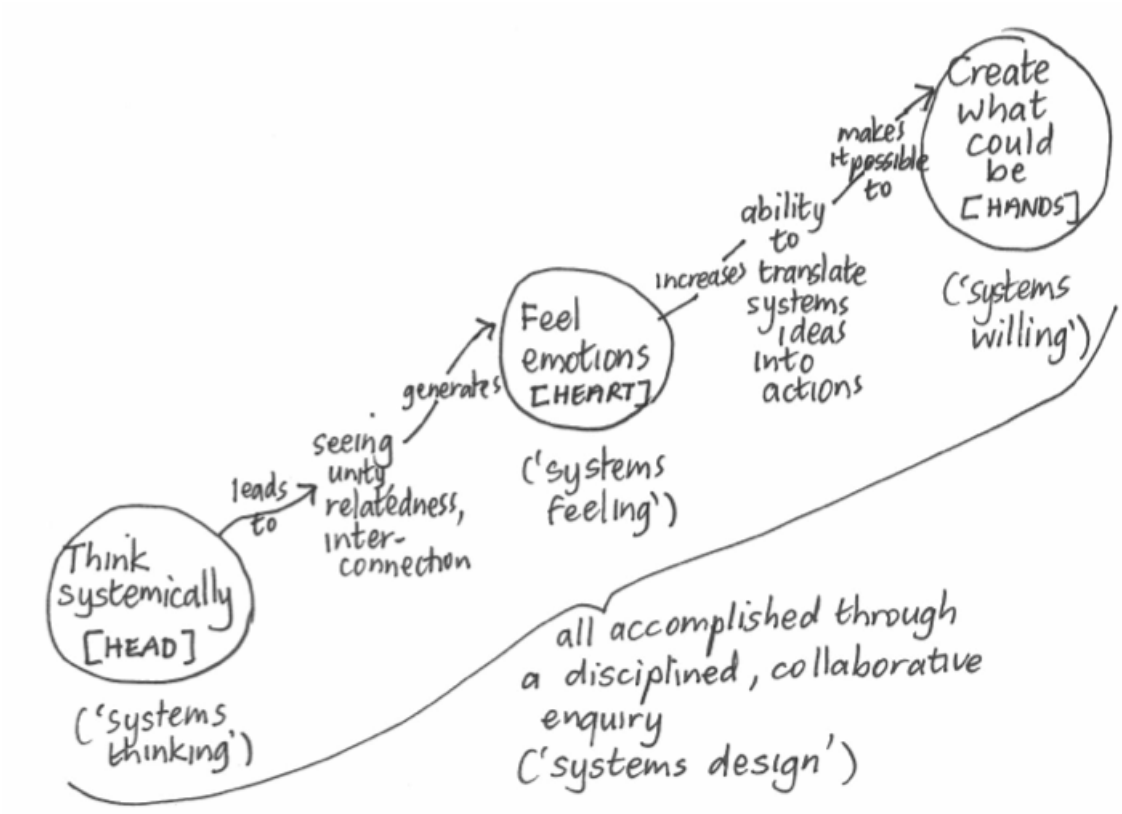

Figure 27 - Researcher's own construction of Laszlo's ideas (SOURCE: Thoughts outlined by Lazslo, 2012, p. 100)

It is really clear from this diagram that feeling plays a 'bridging' role between thinking and action.

According to Laszlo, the connection between systems thinking and systems feeling is made when you engage in real-life experiences and reflect on what happens, and it is made through "practicing the art of conversation" (Laszlo, 2012, p. 99). (This echoes Austen's thinking). However, conversation for Laszlo not only involves speech acts, which is Flores' focus (Winograd & Flores, 1986), but also encompasses emotion. Like Flores, she refers back to Maturana's understanding of organisations as a network of conversations with a flow of information that leads to coordination of actions. However, unlike Flores, she *includes* Maturana's views on emotion and love[17] in her theorising (which Flores does not). Laszlo shares with Maturana an appreciation that human beings live in both language ***and*** *in emotions* (a fact that even Checkland recognises, as has been pointed out already.) It is the

[17] Lazslo quotes Maturana as saying that "emotions are fundamental to what happens in our doings" and "love is the only emotion that expands intelligence, creativity and vision; it is the emotion that enables autonomy and responsibility" (Laszlo, 2012).

combination of words and feelings that gives conversations the power to "facilitate change and create a desirable future" (Maturana & Poerksen, 2004). Laszlo calls conversations that combine language and emotion "deep conversations" and she argues that these deep conversations, in which feeling is allowed, "generate learning, shift and change people's perspectives and allow the creation of shared meaning" (Laszlo, 2012, p. 100). Like Checkland and Flores, Laszlo recognises the importance of sense-making through language. Her recognition that learning happens in conversation she shares with Checkland, Flores, Argyris and Raelin. She also shares with Kline a recognition of the importance of honouring feelings in conversations. Allowing emotional appreciation of the interconnectedness of people, creates a "context of safety, respect and freedom to be and create, as well as collaborate and learn," she says (Laszlo, 2012, p. 98).

In addition to providing opportunities for learning and sense-making, Lazslo highlights (following Banathy) that in addition to being "deep" (i.e. including feeling), conversations also need to be both generative *and* strategic[18]. She says that a strategic conversation focused on creating a common future, is *not* effective without a generative conversation through which people can invent a sense of community. (This explains why the second AR cycle derailed). Furthermore, all the deep relationships and innovative ideas generated in interactions between people, will end up as memories rather than realities if there is no strategic focus on creating a sense of shared purpose (Lazslo, 2012). In the work that I did as cluster coordinator, leader and facilitator, I focused on the generation of shared purpose, but neglected the need to build a sense of community.

Like Kline, Laszlo also recognises the importance of 'being' but her perspective is not of individual being but rather of 'systems being.' Laszlo describes 'systems being' as embodying a consciousness beyond the sense of self, that encompasses the wisdoms of the many different peoples and beings on Earth, as well as acknowledging the existence of an interdependency with plants and animals (Laszlo, 2012, p. 101). 'Systems being' links together "head, heart and hands," to express "listening beyond words, sensing with our whole being, and expressing our authentic self in every moment of our life" in the process transforming ourselves and the world, according to Laszlo (2012, p. 101). It is my sense,

[18] With hindsight, it is evident that the design of the Action Experiments for the social housing NGO, included both strategic and generative conversations.

reflecting on the action research cycles, that we began on this journey with the social housing NGO's board and managers.

A further contribution of Laszlo relevant to this study is her distinction between 'systems thinking' and 'evolutionary systems thinking.' She notes that systems thinking focuses on the "pattern of organization" of a system and provides a rigorous way to take an aerial view of a situation of concern, so that interconnections between elements of the problem can be noticed. By contrast, evolutionary systems thinking focuses on the "pattern of *change* [of that system] *over time*" and calls for thinking in terms of the 'big *moving* picture" (Laszlo, 2012, p. 97). This emphasis on the "*moving* picture" of change over time is not given the same prominence in the work of Senge and Checkland (although Checkland does incorporate Vickers' ideas of the flux of events through time.) Flores notes the importance of time in his Action Workflow, but his interest is in time as a "by when" actions will be completed. He doesn't highlight the effects of "change over time". Argyris' (1993) suggests that the process of shifting people from Model I to Model II takes more than a year at the very least, but he does not focus on patterns of change over time. Kline (2010) notes that when the Thinking Environment is used, time seems to actually slow down (in the sense that conversations and meetings take less time when the process is followed.) This idea of constant change through time resonates with the lessons of the Vipassana mindfulness practice too.

Whilst the co-creating role of all stakeholders is recognized, what is also missing in the other theorists cited is the inclusion of the "participants" as co-*leaders* of the process of designing purposeful action. Both Raelin and Checkland place the facilitator inside their diagrams or models (either directly or implicitly), but exclude the participants in their pictorial representations (as has been noted). Laszlo (2012) puts forward the idea that the evolution from systems thinking to systems being requires the development of the shared leadership capacities of the group such that "everyone follows and everyone leads." In so doing, she makes the idea that we (facilitators and participants) are equal co-producers of our social realities, explicit. Reflecting on the action research experiments, we also allowed for this to happen in that facilitation by "co-creating" the action not only with the CEO before the session, but also with the participants on the day. However, the participants found this process very challenging and actually fought vociferously for certainty and control over the process.

Laszlo also highlights that leadership itself is not something external to the conversation process. Evolutionary leadership emerges from within the group process of engaging in generative and strategic conversations. Thus it can be argued that leadership in the evolutionary process from thinking to being, is not the sole domain of the facilitator or the problem owner. Leading and following is a flow between people. It is no wonder then that the cluster research has found that there is no obvious leadership in clusters. Cluster coordinators instinctively 'create' co-leadership in order to get things done.

Laszlo's ideas on systems thinking-feeling-being and evolutionary leadership are helpful in concluding what I learned personally in this thesis journey. The theoretical lenses selected generated unexpected insights into how I was "leading", and these personal insights led to a search for new theoretical lenses to help "fix" these leadership "problems". Through the mechanism of auto-ethnographic reflection, the research process evolved into a personal learning journey as well (and as such, was a kind of 'artistry' process as Austen outlines it).

This kind of experience is well articulated by Laszlo (2012, p. 97) when she says:

> *"As I reflect on my own learning journey, I see systems thinking as the gate that has opened up opportunities for exploring how to become more fully me." (Kathia Laszlo)*

The same has been true for me. This thesis has led me through a personal journey to a fuller and more accepting appreciation of myself as a being-in-the-world. The frameworks of ideas that were used as lenses with which to study the core research questions, opened up exploration of myself as a situation of concern too (for myself and for others.)

This exploration of my own experiences with disharmony and breakdown in particular, made the inclusion of "being" into the activity of "designing purposeful action" become essential. It was recognized that the being that intervenes as a facilitator needs to be present as a being-doing in the situation as it unfolds, and is co-created, with other stakeholders over time. As a result, it is concluded finally that a being-doing approach is required when designing purposeful action among divergent stakeholders to solve wicked problems.

FINAL WORDS: A THANK YOU

Walsham (2006) says that "it is insufficient to say that: 'I have applied the principles'. It is essential to say, 'Here are my interesting results'" (Walsham, 2006, p. 326). I hope you found the results intriguing and the journey as interesting as I did.

Thank you for your time and attention.

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Appendix One: Reflections and Notes from Action Research Cycles One and Two

Reflection after the first Action Research Cycle

Reflection Date: 2 April 2014

In reflecting about what happened during the first AR cycle, there seem to be a number of 'requirements' I need to have as facilitator during the Strategy Workshop. These include the following:

- I need to be present and aware myself, so I must do some yoga and a mindfulness practice before the session on each day.
- The participants bring their bodies to the workshop and they think best when their bodies are conscious and aware. Thus a core job at the beginning and end of every session is to ground them in mindfulness practice and noticing of any tensions in their body. By slowing things down, this will also aid the maintenance of the component of "ease". I will do grounding breathing at start of every session.
- The facilitation is a performance. Each session is an act, with intermissions between acts and pauses to breathe at the start and finish, and appreciate what has been achieved. The performance will have an arc with shifting energy. The qualities that will help me know that people are emotionally engaged will include mood as indicated by energy and enthusiasm, body language, eye contact, words used and pace of speaking, signs of yawning and seat shifting.
- People do not think well under conditions of control and urgency and certainty. This creates stress and anxiety that takes their minds off the process of sense-making. They think best under conditions of ease, respect and interest. They think best when the ten components of a thinking environment are in place. My key role in the workshop is to ensure that all these ten components are maintained. Kofman and Senge (1994/2001, p. 23) say that learning requires the slowing down of time of time and action to allow for reflection." The Kline "Rounds" allow for reflection without interruption.
- If the thinking environment is maintained in the second workshop, there will be low levels or no manifestations of defensive behavior. I will share with the group upfront a little about the Model I world and how defensive routines are to be expected in any situation perceived to be threatening or embarrassing, and highlight Model I behaviours as being the following: setting a goal and working to achieve it, being rational, minimizing negative feelings and seeking to win and avoiding losing.
- I need to model in myself the kind of being that is desired from the participants, which requires letting go of their certain ideas about themselves, and the organization and the world, and not being frozen by their fear of change, and being willing to say what they really think, not group think. This means I need to be willing at some point to model providing a "disclosure" that indicates I do not have the answer, I am uncertain, vulnerable, not sure, in order to free them to do

so also. I need to be humble and open to feedback and especially I need to not fall into the trap of trying to look good by quoting research. I have to give up my certainty and recognize my interdependency. This relates to Raelin's requirement of "Being" but at a deeper level than he proposes.

- If I have the experience again where 'an emotional issue' is discussed and the energy closes down, I will have a conversation about what is happening – ground my assertion in comments, ask for input from everyone about why they agreed to the session when they are clearly closed off body-energy wise to the discussion; i.e. make the undiscussable discussable, as suggested by Argyris, and use concepts from Flores, such as "grounded assertions".
- People relax and feel safer when they know what process will be followed, they understand and feel safe within the process, and if they are given an opportunity to agree to the process. Thus in the next session I will also highlight the broader structure and framework of the workshop and be more explicit in sharing with participants what theoretical frameworks we will use in facilitating the process, in line with Argyris' argument that the facilitator should be explicit about her thinking process.
- The thinking environment is critical for enabling the achievement of a common purpose for the organisation. Kofman and Senge say (2001, p. 24) that if people cannot surface their hidden assumptions, opinions and emotions, they can't build new shared views of the business issues. They also say developing capabilities in reflection and conversation is necessary in order to attain insight into business issues, as well as conceptual and inquiry skills. I will thus highlight Kline's "Ten components" of appreciation, attention, diversity, ease, encouragement, equality, information, incisive questions, feelings, and place. I will remember to keep appreciating and thanking and emphasizing the positive.
- Participants are going to want to get down to action and make decisions, and our key role is to keep them thinking openly, testing assumptions, and exploring options.
- I need to be open to the possibility of failure. I must maintain an openness, a willingness to be vulnerable, and an acceptingness of what is happening and that what is happening is right for the moment. I must not wrong-make myself, my colleagues or the group. If I feel judgements arising I must notice them and breathe out the tension. If things do breakdown I will use it as an opportunity to get group problem solving happening, and if necessary let someone else facilitate for a while till I get thoughts on how to get things back on track.

Reflection after the second Action Research Cycle

Reflection Date: 16 April 2014

These are some reflections and learnings from Action Research Cycle Two:

There were a number of derailings and disharmonies that happened on the first day, within the first two hours, that had consequences for us, including doubt and uncertainty in ourselves as well as in others about us. First, in explaining what we would cover in the workshop, which was done before the first Round, B. (one of the Board members) asked how often we have done this kind of strategy making and what my credentials were. E., sitting next to me, immediately got defensive and kicked back. I blanked out for a bit (I lost contact with the room and the fact I was in a room and the fact that there were people in the room. E. noticed this and asked me later "Did you blank out?" I am not sure if I was silent for a while and that was the reason he argued back at B. about "identity", but it took me quite a while to regain mental equilibrium. Physiologically I think I went immediately into "flight" mode because I felt his comment as a direct blow not only to my ego (which is fragile on this subject because I have not done it in this way before) but also to my identity issues of "am I competent" and "am I good enough." So as a "bullying tactic" it was highly effective at seeding doubt in the minds of the Board members that we are inexperienced and this showed in the second session when R. and L. went into uproar as well about our academic methods and terminology. We did not handle this well by responding by changing our facilitation plan to accommodate them, and constantly playing tag as a team trying to strategise what to do next. They noticed this. One of the strongest feedbacks (from L.) was "please can there just be one facilitator in charge. We don't like this "tag team" method. It is confusing and hard to follow." I also got a comment from L. as she got up from her chair to go outside, said almost in passing as an insult, that I am the worst facilitator she's ever seen. She also works for a listed company in a high up role. She constantly showed her irritation quite obviously with loud sighs and frowns between her eyebrows and slouching in her seat. She was visibly agitated. At the end of the session she gave me all negative feedback as a contribution she thought to how we can do things better. ....

In effect I also allowed her to bully me because on both occasions her comments started to upset me and I got tears in my eyes that I had to pull back with breathing and talking to myself positively. I went to the thought that I am not a good facilitator and I should not be trying to be a facilitator. Nonetheless, I pulled myself back because we were being paid to do a job and I was not going to let the team down or run away from a learning experience. I took some time out and decided to rise to the challenge to be the lead facilitator in charge and not let myself get so affected by criticism, and A.'s feedback at the end was that I was a good facilitator. She said you that could see I have facilitated a lot because I can command the room.

That said, I have to learn to protect myself from bullying and criticism by not taking it personally. I don't know how I do that. I also need to get better at maintaining a calm physical state and not going to anxiety and self-doubt and withdrawing behaviour. My key reflection for myself right now is that I would much rather work in an academic environment where people are open to learning and testing and practicing, and I can

teach and coach. I am definitely not suited to the big business world the way it works. Physiologically I just can't cope with any direct attack on my competence or being by controlling, dominating others. It is so unnecessary and so unproductive. I am even more convinced that we need to build work environments where people respect one another's dignity and equal rights, appreciate, affirm, and encourage one another, share valid information and ask questions, and treat one another as thinking equals and "being equals". The question is what method, technique or skill do I need to acquire to enable me to rise above the personal attack to create an opportunity for transformation? Certainly what I did realize is WHY an identity issue such as "am I competent", "am I good enough" or "am I worthy of love" makes a conversation a "difficult conversation". It is because it sews doubt. I felt not competent enough so it was more difficult to have the conversation. If I felt competent I would have dealt with him by dismissing his comment and saying I'll get back to him later.

I had to lead beyond power and I struggled with this. After the attack (but not before) I felt very powerless in the environment – I have not led exactly this process before. I do not have any role power of leading the organization. I do not have reputational power of being an expert or being famous. I do not have streetsmarts because I have avoided fighting battles in highly competitive environments. I do not have "youth" power or "being black" power either (and in fact, part of the reason I said S. should lead the morning session is because I really felt he would be able to command more respect than I could because he is young, black and very capable, and he did a great job. He just needs more confidence so that he commands the room. I don't think he realizes how confidently he comes across. I only picked up the facilitation again when he said he "was finished" and couldn't do any more facilitation.)

It would be so amazing if one day I can face a challenge like that, in a situation of direct assault on my weak areas, and remain completely unaffected emotionally or physiologically. I think I would have to be in a place that is incredibly accepting of myself and loving of myself, and I would have to be able to completely let go of any "ego" or power issues – how I look, how old I am, how white I am, how frail I am, how low my energy can be, how poor I am, how unknowledgeable I am, etc.

On the positive side, it has made me more determined to master facilitation under difficult conditions.

Both L. and B. said they've run their own strategic planning processes before and they have the knack of it, so their belief that they know how it should be run made them more rigid and less open to new methods. Unfortunately we did not run the process of integrative thinking really well – which is what we needed to focus on – because the relevant team member was unavailable at the last minute on the second day and we made poor substitutes. However, we did realize that our approach is a good one and if we had focused on our thrown-ness method and stuck to our guns during participant doubt we would have delivered better results.

While being blanked out, my thinking process was that in facilitation as Argyris does it in moving to Model II behavior, one has to be willing to submit one's thinking to public scrutiny, to be willing to model vulnerability and willingness to be learn … and so I said this. I also said whilst my ego's desire was to jump to defensiveness and give credentials, this is not what is the right thing to do … but really I should have stopped him

immediately and told him to deal with it through the chairlady at teabreak because he was engaging in undermining behavior – of the strategy committee and his fellow board members, as well as myself and the team. He was engaging in Model I behavior – which is ironic considering that he said there had been conflict in the past and he didn't want it at the session. (He is the director of a listed financial services company. He was perhaps put out by the fact that I said upfront we did not want to know anyone's role identity. We are all thinking partners of equality and that information can emerge later, so there was no opportunity to "be your role" or "control through power". The tension was released a bit later when a more senior team member arrived while we were going through answers to the question "What delights you about being part of the strategic planning process and what outcomes would make your investment of time worthwhile". When he had to do his intro he started talking about his role and his thinking, and I said you're not allowed to talk about roles or words to that effect, and everyone laughed (can't remember exact words.) (I really wish could have taped the sessions. I'd love to go back through the transcripts again.)

The next session, going through the causal loop diagram, also degenerated very quickly. There was widespread Board disharmony about the "negativity" of the causal loop. It was also led by E. and his style – which the client said related to his "preachy" way of using language, further accelerated the conflict. E. said he was "making a stand on his being," and he didn't care if people think he is arrogant, and he will argue back. Part of the challenge was his use of judging language – like "it is shocking that …" His way of leading this session was not helpful. Also the room's circle was broken up to make it possible, and he sat behind a desk and "preached and intellectualized" (A.'s words) from there. In addition, he was very scruffily dressed relative to the rest of us – his shirt was too tight, nothing matched, he looked like a student. The effect in combination was that there was a reaction to the "academia" – we do not want to hear difficult language, why can't you make it simple, this is not an academic environment it is a work environment. People found it difficult to understand the diagrams, they found them negative when they wanted to move forward positively, and they had difficulty understanding what was going on. A more senior team member rescued the situation and regained their confidence, but we lost it again the next day because we were actually at sea with regards to exactly how to enact the changes the client requested overnight.

Personally, I am not going to give up. I am going to find easier cases to practice on though …