

All Changes Great and Small: Exploring Approaches to Change and its Leadership

MALCOLM HIGGS & DEBORAH ROWLAND

Henley Management College, Human Resource Management, Greenlands, Oxfordshire, UK

ABSTRACT *Although the growing need for change in organizations it is widely acknowledged it is asserted that up to 70% of change initiatives fail. While there have been attempts to understand the reasons for failure these have been seen as inconclusive, and a need for further empirical work has been identified. Within the growing literature on change leadership there are assertions that the root cause of many change problems is leadership behaviour.*

This article begins by exploring the change literature and, in particular the broadening of this literature with the inclusion of complexity and evolutionary theories. From the literature the authors propose a typology of change approach is proposed. In examining change the authors also examine emerging thoughts from the change leadership literature. Combining these different streams of literature leads to three core research questions, which are:

- (1) What approach to change management is likely to be most effective in today's business environment?*
- (2) What leadership behaviours tend to be associated with effective change management? And*
- (3) Are leadership behaviours related to the underlying assumptions within different approaches to change?*

These questions are explored using a case study methodology. The study involved seven organizations and 40 informants who provided 70 change stories. The data was initially analysed as qualitative data and subsequently (following participant lines of inquiry) quantitatively.

Both qualitative and quantitative data indicated that change approaches that were based on assumptions of linearity, were unsuccessful, whereas those built on assumptions of complexity were more successful. Approaches classified as emergent change were found to be the most successful. In examining leadership behaviours three broad categories emerged: (1) shaping behaviour; (2) framing change; and (3) creating capacity. Analyses of the data indicated that leader-centric behaviours (shaping behaviour) impaired change implementation.

The implications of the findings are discussed together with suggestions for further research.

Corresponding Address: Malcolm Higgs, Henley Management College, Human Resource Management, Greenlands, Oxfordshire, RG9 3AU, UK. E-mail: malcolm.Higgs@henleymc.ac.uk

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Introduction

According to many authors, up to 70 per cent of change initiatives fail (e.g. Kotter, 1990; Hammer and Champny, 1993; Higgs and Rowland, 2000). However, there is a growing need for organizations to implement major changes in order to be able to respond in a business environment that is becoming increasingly volatile and complex. So what are the reasons for consistent failure and what leads to success? This article explores these questions and presents empirical evidence that explores approaches to change, which appear to be successful. In addition it examines the leadership behaviours, which contribute to this success. The authors recognize that in exploring the theoretical underpinnings of change and its leadership that they can only produce a brief overview of a significant and complex literature. However, this is done in the spirit of encouraging further debate and inquiry rather than presenting a definitive picture.

The problem of failing to manage change is illustrated by Buchanan *et al.* (1999). They report the results of a survey, which showed that managers have neither the expertise nor capacity, to implement change successfully and that managing change according to textbook theory is difficult. Stacey (1996) argues that the prevailing theoretical paradigms are based on assumptions that: (1) managers can choose successful mutations in advance of environmental changes; (2) change is a linear process; and (3) organizations are systems tending to states of stable equilibrium. This paradigm has a long history, perhaps beginning with Lewin (1951) who proposed the classic three-stage model of the change process that is shown in Figure 1. The centrality of this 'mental model is illustrated by Kotter's (1990) study of the reasons for failure of major transformational initiatives. The ten causes of failure identified by Kotter can readily be mapped onto Lewin's three-stage model.

This view of change encompasses assumptions that change, because of its linearity, is a relatively straightforward process and that it can (and should) be driven from the top of the organization and be implemented uniformly according to a detailed change plan (e.g. Beckhard, 1969; Kotter, 1990; Hammel and Champny, 1999). However, subsequent interpretation of Lewin's work challenges this simplistic view (e.g. Elrod and Tippett,

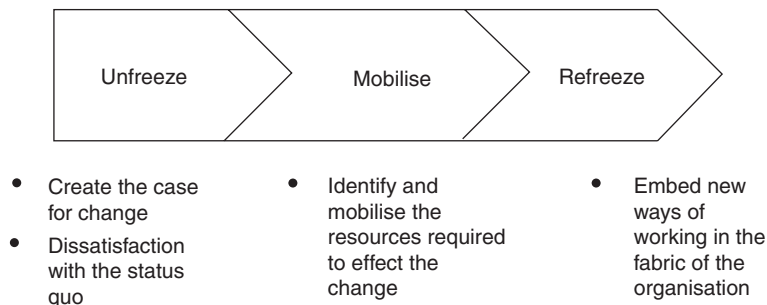


Figure 1. The three-phase model of change (adapted from Lewin, 1951)

2002). Building on this Stacey (1996) challenges the assumption of linearity and suggests that change may in reality be a more complex process. This view is shared by others, whose approaches entail educating managers in a range of change theories, and involving them more actively in the change process by equipping them with practical tools (e.g. Senge, 1990; Beer and Nohria, 2000). Although seeing change as a more complex process this 'school' retains the assumption that change can be implanted uniformly throughout the organization. However, this assumption of such a 'one look' approach is widely challenged (McGahan and Porter, 1997; Rumselt, 1991). Rumselt (1991) points out that empirical research has demonstrated that strategic intent led change programmes often have unpredictable outcomes generated by interactions within the network. Similarly, in the context of organizational culture change, Harris and Ogbonna (2002) present empirical evidence demonstrating the failure of top-down change and the impact of unexpected or unintended outcomes resulting from interactions throughout the system.

Some have responded to this view proposing an approach that, while retaining the assumption of linearity, recognizes the need for a more distributed view of the nature of changes. Within this 'school' the general seat of change is set at the top of the organization and agents throughout the organization are equipped with a range of 'change tools' which they can determine how to use in pursuit of the overall direction (Pascale, 1999; Senge, 1997; Buchanan and Boddy, 1992).

Complexity and Change

It is evident that there is a growing realization that change is a complex process (Senge, 1997; Pascale, 1999; Rumselt, 1991). More recent research has considered the emerging field of complexity theory (e.g. Reynolds, 1987) and the associated development of the new sciences as a source of understanding change. Sammut-Bonnici and Wensley (2002) recognize the difficulties of constructing structured approaches to change and argue that research using evolutionary theory (including complexity theory) may lead to greater insight. This view is supported by others working in the field (Litchenstein, 1997; Metcalfe *et al.*, 2000; Aldrich, 1999; Depew and Weber, 1995). Sammut-Bonnici and Wensley (2002), in applying evolutionary theory to organisational transformation, draw an important distinction between complicated systems and complex systems. They point out that complicated systems are rich in detail whereas complex systems are rich in structure. Building on this distinction, Litchenstein (1996) proposes that the root of much of the failure in change is that managers are trained to solve complicated problems rather than complex ones. Thus managers view change as a problem that can be analysed and then solved in a linear or sequential manner. However, complex problems require managers to cope with dilemmas in the system rather than to arrive at definitive solutions.

The application of evolutionary theory as a framework for the understanding of change and transformation, is further developed by Depew and Weber (1995). They identify three models of evolution: natural selection; probability; and complexity. Their application of this thinking within a change context is summarized in Figure 2.

This approach is reinforced in Aldrich's (1999) discussion of the application of the evolutionary model to the study of transformation. He identified three key elements that are variation, selection and retention. It is in the last element that Aldrich differs from Metcalfe *et al.* (2000). Aldrich identifies retention as being the point at which a transformation is completed when the knowledge required for a new form is embodied in a

<p>Natural Selection</p> <ul style="list-style-type: none"> • The fittest or most adapted to the environment are selected • There is a gradual steady reate of change which is only visible over a long period of time • Variation occurs by change, not intent 	<p>Probability</p> <ul style="list-style-type: none"> • Change results from historic contingency and stochastic drift • Change may be seen as punctuated equilibrium • Sources of change are external • Evolution has a dual nature 	<p>Complexity</p> <ul style="list-style-type: none"> • Organisations are self-organising • Organisations are in a process of continual adaptation • Change is influenced by sensitivity to initial conditions • Change in no-linear • There are increasing returns from changes • Changes is notable for the emergence of novelty
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Figure 2. Evolution and complexity (adapted from Reynolds, 1987)

community of practice and it is operated by individuals, groups, structures, policies, programmes or networks. Blackmore (1998) argues that change in organizations is a process of displacement of older, less well-adapted technologies or ‘strategic memes’ by newer forms. It is this view that may be seen as being linked to Aldrich’s (1999) concept of retention.

The concept of the dual nature of change proposed by Depew and Weber (2002) is useful in understanding where and, to an extent how, change takes place within a system. The proposition is that new ‘memes’ are developed by individuals isolated from the main body. This concept is further developed by Sammut-Bonnici and Wensley (2002), whose dual nature view of evolution is presented in Figure 3. Implied in this is the view that change occurs at the periphery or edge of the system, a point emphasised by Wheatley (1994). Wheatley also emphasizes the importance of cross-fertilation of ideas from differing areas within an

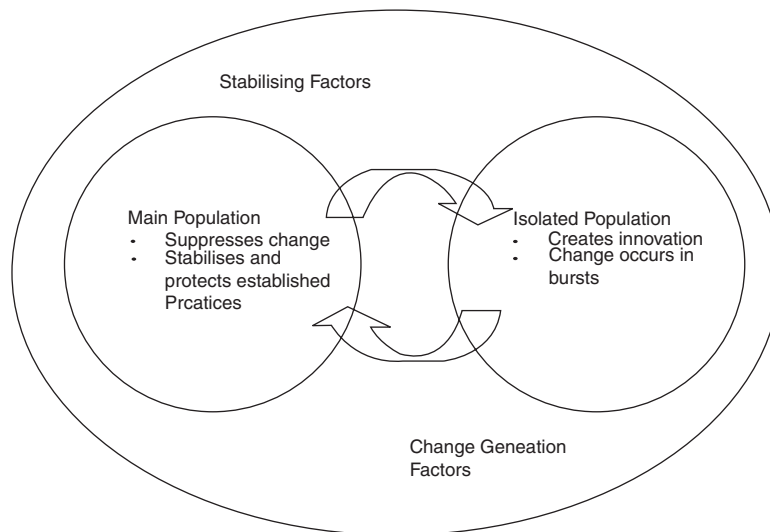


Figure 3. The dual nature of evolution (adapted from Sammut-Bonnici and Wensley, 2002)

organization, which not only resonates with Sammut-Bonnici and Wensley (2002) but also with Aldrich's (1999) concept of retention.

Authors adopting both evolutionary and complexity views of change tend to share a view that complex phenomena do not lend themselves to linear and predictive models. Rather, building on the work of Reynolds (1987), they share a view that complex systems are governed by having a general direction and a few simple guiding rules. They are self-organizing and can move in harmony without a leader. The outcomes of interaction cannot be predicted but rather patterns emerge. This last point has given name to a 'school' of change based on the principles of evolution and complexity – emergent change. The governing assumptions of this school are that change is a complex process and that it cannot be implemented on a 'top-down' or uniform basis (e.g. Wheatley, 1993, 1994; Stacey, 1996; Shaw, 1997). Interventions from this perspective tend to recognize that change is a 'messy' rather than planned activity (Shaw, 1997). Weick (1995) indicated that this recognition tends to almost reverse the Lewin model and that, if three phases can be identified, they are: (1) freeze – study the complex system at a point in time; (2) adjust – encourage and stimulate adjustments to achieve necessary changes; and (3) unfreeze – allow the system to continue functioning having made the adjustments. In working with practitioners, Litchenstein (1997) identified that the main interventions from an emergent perspective tended to be concerned with building relationships and a container for change. Working on this basis he found that real change occurred at the edge of linear logic and led to the emergence of a new order. This focus on relationships is further emphasized by Shaw (1997), who maintains that it is the change in the nature of conversations between actors in a system that lead to the emergence of new behaviours. Further evidence for this view is provided by Robichaud (1995) and Weick (1995), who additionally point to the role of action between actors in the construction of meaning. Jaworski and Scharmer (2000) identified core practices for success within this emergent view of change, which are:

- (1) Observing: seeing reality with new eyes.
- (2) Sensing: turning the observed reality into emerging patterns that inform future possibilities.
- (3) Envisioning: crystallizing vision and intent.
- (4) Executing: acting in an instant to capitalize on new opportunities.

In reviewing the literature on complexity and change it is important to be cognisant of a number of opposing views. In particular Strickland (1998) points out that there are questions about the relevance of complexity within the natural sciences and thus their relevance to organizational phenomena.

A Summary of Approaches to Change

From the above it is evident that the assumptions underlying change may be characterized as lying on two axes. One is concerned with the perception of the complexity of change and the other with the extent to which it is believed that change can be effected on a uniform basis or is seen as a more widely distributed as an activity. Figure 4 summarizes the way in which the different streams of literature map onto these dimensions. However, the authors recognize that this summary may be somewhat contentious and simplistic.

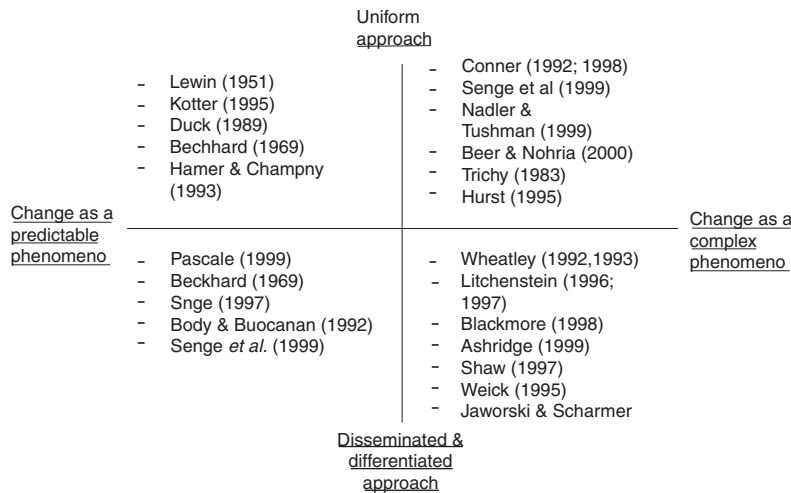


Figure 4. Map of literature on change

Indeed, a number of authors appear in a space on this diagram, which represents either a dominant view taken by the authors or differing views evident from differing periods of their work. Thus Figure 4 is a potential rather than definitive categorisation of the works reported in the literature.

The detailed analysis of the work of these authors leads to the development of a potential model of approaches to change which is shown in Figure 5. However, the question as to the relative effectiveness of each of these approaches remains one to be explored.

Leadership and Change

It is beyond the scope of this article to attempt to summarize or explore the vast literature on leadership. However, there is clear, and growing evidence that the role of leaders in the change process does impact significantly on the success of change (Kotter, 1990, 1996; Conner, 1992; Higgs and Rowland, 2001; Higgs, 2003). The beliefs and mind-sets of leaders have been shown to influence their orientation of choices and approaches to problem solving (Finklestein and Hambrick, 1996; Hambrick and Brandon, 1988). Thus it may be implied that a leader's behaviour will influence their approach to change and its implementation. It has been asserted that the role and behaviours of leaders in a change context per se has been an area that is lacking in empirical research (Higgs and Rowland, 2000). However, the transformational leadership model developed by Bass (1995) has been one that has been the subject of much empirical investigation. This stream of research does demonstrate clear linkages between leader behaviours and a variety of 'follower' behaviours and performance measures (Alimo-Metcalfe, 1995; Higgs, 2003). This research, which is primarily quantitative, does, however, fail to link directly with the change literature. Furthermore, there have been criticisms that this highly quantitative approach fails to provide insights into the actual behaviours of leaders (Kouzes and Posner, 1998; Kets de Vries, 1995; House, 1995). Those studies which have responded to this challenge have tended to conclude that for effective

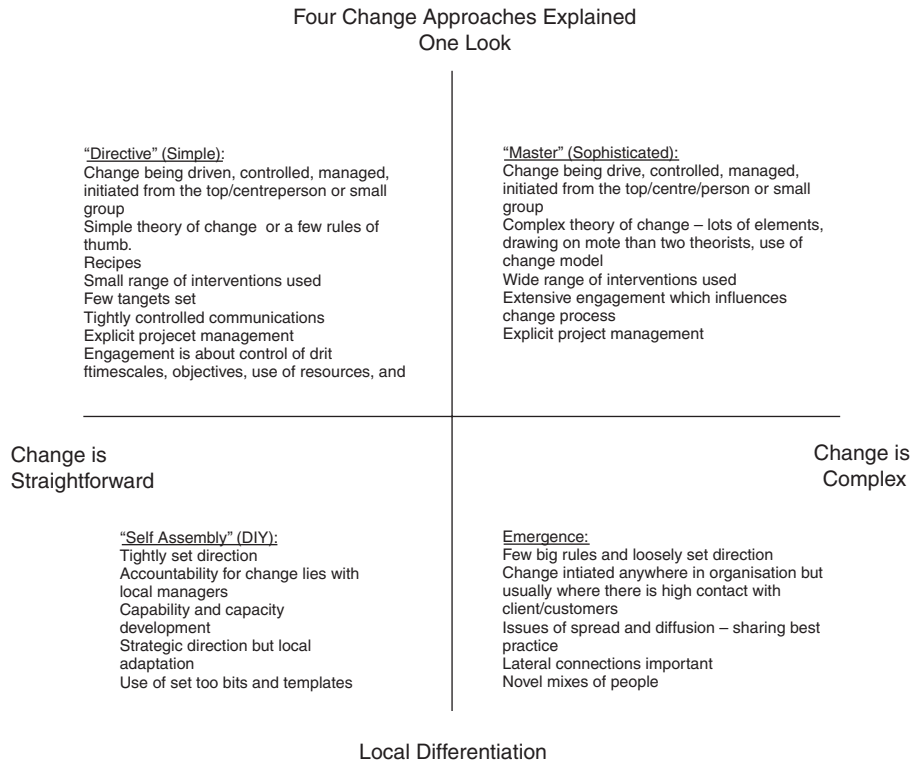


Figure 5. RFLC change. TMRFLC (2003)

leadership there are a relatively small number of broad areas of behaviour which are executed in somewhat differentiated ways depending on the personality of the leader (Goffee and Jones, 2000; Kouzes and Posner, 1998; Higgs, 2003).

In examining the leader's role and behaviour in the change process few studies have moved beyond generic descriptions. An exception to this are the studies reported by Higgs and Rowland (2000, 2001). These studies specifically linked leadership behaviours to activities involved in implementing change. They identified five broad areas of leadership competency associated with successful change implementation. These were:

- (1) Creating the case for change: effectively engaging others in recognizing the business need for change.
- (2) Creating structural change: ensuring that the change is based on depth of understanding of the issues and supported with a consistent set of tools and processes.
- (3) Engaging others in the whole change process and building commitment.
- (4) Implementing and sustaining changes: developing effective plans and ensuring good monitoring and review practices are developed.
- (5) Facilitating and developing capability: ensuring that people are challenged to find their own answers and that they are supported in doing this.

However, the work of change used as the basis for this study was rooted in a view of change which fell into the 'master' quadrant shown in Figure 5. Some have questioned the efficacy of such a view of leadership within a change context (e.g. Senge, 1997; Wheatley, 1992, 1993; Wheatley and Kellner Rogers, 1996; Giglio *et al.*, 1998). In particular it is argued that a different perspective on leadership arises in the context of a complex and distributed view of change (Senge, 1997). If change is perceived as complex and emergent then Wheatley (2002) argues there is a need to bring leadership to a transformational edge so that they can work differently. However, she recognizes that this both flies in the face of conventional views of leadership and is uncomfortable. However, beyond such theoretical conjecture there is little research that explores a broader relationship between leadership and differing approaches to change.

Summary

While, from the above, it is clear that successful implementation of change is a difficult goal (Kotter, 1996; Higgs and Rowland, 2000, 2001) there is relatively little research into what does lead to successful change. Kotter's seminal study in 1990 was rooted in assumptions that change is linear and driven from the top. However, the literature reviewed challenges this assumption and proposes a more comprehensive way of categorising and examining change. Much of this literature is, however, theoretical and derivative (e.g. Litchenstein, 1996; Aldrich, 1999). There appears to be an absence of empirical research that explores the relative efficacy of different approaches to change.

At the same time it is evident that the vast leadership literature has not really explored the linkages between leadership behaviours change models and change effectiveness. Taking these two points together gives rise to the following research questions:

- (1) What approach to change management is likely to be the most effective in today's business environment?
- (2) What leadership behaviours tend to be associated with effective change management?
- (3) Are leadership behaviours related to the underlying assumptions within different approaches to change?

The remainder of this article describes the results of an empirical study designed to explore these questions.

Methodology

In determining an appropriate methodology for the exploration of the above research questions it was important to address two issues. First, in exploring the change models it would be important to be able to surface the unintended or unplanned consequences of interventions. This suggested a case study based approach, particularly as a number of the areas were identified as being predominantly theoretical with limited empirical evidence. Eisenhardt (1989) provide support for such a choice pointing out that case study research is a valuable approach for theory building where existing knowledge is limited and the focus of the study is not typicality but the unusual, unexpected, covert or illicit.

The second issue was prompted by the study conducted by Litchenstein (1997) in which he highlights the dilemma of the academic logic of change compared with the intuitive and practical experiences of change agents. This, in part reflects the mode 1 and mode 2 research debate (Gibbons *et al.*, 1994). Gibbons *et al.* (1994) suggest that the study of organizational change linked to evolutionary theory may most appropriately be positioned as being between mode 1 and mode 2. Huff (2000) expands on this view and emphasizes that knowledge is produced in organizations and not just universities. The mode 1 and mode 2 debate is highlighted by Anderson *et al.* (2001) who developed a model of research that balances academic rigour and practical relevance (Figure 6). They maintain that unless academics combine methodological rigour and practical relevance then the academic practitioner polarisation in management research will harden. However, others argue that relevance alone is not enough to develop real insights into complex organizational phenomena (Huff, 2000; Huff and Jenkins, 2002; Balogun *et al.*, 2003). Such authors argue for more practitioner involvement in the research process, whilst simultaneously maintaining rigour. Indeed Balogun *et al.* (2003) argued that the complexity of areas of study such as strategy and organizational change call for the need to study practitioners in the context of their work and the need to move away from the researcher as the interpreter of data to a model which encourages greater self-reflection from respondents. Huff (2000) proposed an approach to address these issues that may be summarised as ‘collaborative research’ which is different from action research that often disengages before conclusions can be reached. Furthermore, Huff and Jenkins (2002) proposed that collaborative research entails interactive discussion with groups of informed participants and advocated the use of participant generated queries to shape the direction of the inquiry.

Against this background it was decided that this study would use a collaborative research model employing case studies. The case study data was gathered through samples of informants telling stories about changes they had, and were, experiencing. The use of narratives and stories was seen as appropriate within this methodology. Furthermore, the nature of the phenomenon under investigation lent itself to narrative and stories (Denning, 2001; Weick, 1995).

Design

Within this framework seven organizations agreed to participate in the study. Each organization provided a range of informants who would take part in a on-to-one interview

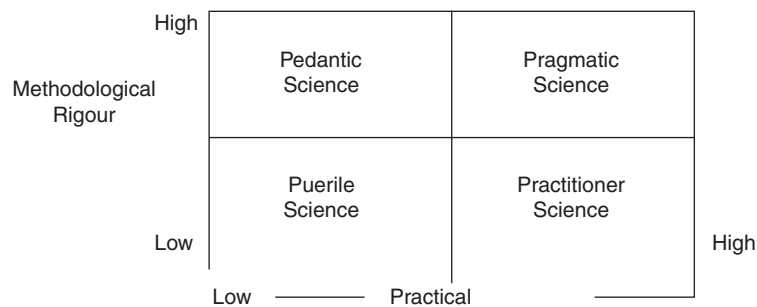


Figure 6. Research approaches (adapted from Anderson *et al.*, 2000)

to explore their experiences of the change process. The informants were all in leadership roles. The interviews were of a semi-structured nature with the study 'collaborators' being involved in a discussion of the interview agenda (which was also informed by the literature review). All interviews were recorded and full transcripts were produced. Within the interview framework informants were encouraged to discuss more than one change story. Thus the unit of analysis was the change story.

The overall design of the stages in the study, was informed by the participants' issues, concerns and questions (Eden and Huxham, 1996). The overall shape of the study is shown in Figure 7. Emerging from this approach was a surprising inquiry from participants. While the methodology had been designed to be predominantly qualitative the questions from participants at stage 4 required answers of a more quantitative nature. In attempting to address their question a review of the literature revealed an approach to quantitative analysis of qualitative data (Parry and Meindl, 2002). Employing this methodology enabled the researchers to respond to the participants' inquiry and indeed led to their raising further questions.

The initial analysis of the data (step 3) was based on content analysis of each change story (Denzin and Lincoln, 2000) and the results were compared to the theoretical model of change emerging from the literature review (Figures 4 and 5). In order to explore the leadership behaviour question (steps 4 and 5), and the need for quantification, the data was re-analysed. This was initially carried out using emerging themes and, subsequently, codifying the data based on agreed themes. The qualitative data was quantified on a weighted frequency basis. This raised methodological considerations. However, as Denzin and Lincoln (2000) pointed out there are a growing range of methodological choices with increasingly blurred ontological and methodological boundaries resulting in less clear direction on how data should be collected and analysed. Furthermore, guidance on the quantification and further analyses of such data was provided by Parry and Meindl (2002). At step 5 the quantified data on both change approaches and leadership were analysed using factor analysis and correlational analyses. At this stage participants opened a line of inquiry that related to the success of different approaches. This necessitated going back to the informants and asking them to rate the success of each of their change stories on a five-point scale (one equalling a failure and five a total success). In addition it was decided that success should be examined within differing change contexts. The interview transcripts were revisited and coded using the following

Step 1:	Engage participants
Step 2:	Collect change stories from participants
Step 3:	Analysis of stories and linkage to theory
Step 4:	Collaborator feedback session. Raised questions about future and extent of leadership behaviour impact. Identified need for more "emergent" change stories.
Step 5:	Further qualitative analysis of data and "quantification" of data for answering, participant queries.
Step 6:	Collaborator feedback session. Identification of need to consider success in relation to differing contexts.
Step 7:	Conducting further informant interviews. Re-visiting informants to collect further contextual data. Further examination of "quantified data to explore emerging relationships between variables.
Step 8:	Collaborator feedback session. Identification of the need to explore findings in an action context.
Step 9:	Planned feedback to collaborators, based on application experience.

Figure 7. Study journey

contextual factors: (1) scope of change; (2) magnitude of change; (3) history of change; (4) timescale of change; (5) source of change; (6) complexity of change; and (7) individual or team led change. Details of these are provided in the Appendix.

From the quantification of this additional data regression and partial correlations were conducted. At step 7 the data was re-examined and further quantitative and qualitative analyses conducted. These quantitative results were compared with the interview transcripts to ascertain the degree of alignment between the quantitative and qualitative analyses. The 'final' presentation of results to participants led to further questions, currently being explored, in terms of practical application of the emerging theory (Eden and Huxham, 1996).

Results

The findings from this study are presented in a way that reflects the stages of the collaborative inquiry and are introduced by a description of the sample.

Sample

The study sample comprised seven participating organizations. These organizations ranged from multi-nationals to a small English professional sports club. The sample included both private and public sector organizations and encompassed manufacturing, financial, high-tech, energy and service sectors.

The participating organizations initially provided a sample of 30 informants. These interviews generated 50 discrete change stories. At step 4 of the study (Figure 7), the need for more stories, which may shed light on the nature of emergent change in practice, was identified. To achieve this, participants identified a further 10 informants who generated an additional 20 discrete change stories. Thus the final sample comprised 40 informants who generated 70 discrete change stories.

Initial Qualitative Analysis

The initial analysis (step 3) was designed to establish the extent to which the model of change (presented in Figure 5) reflected the reality of different practice within organizations. The transcripts at this stage were reviewed holistically and within each change story the dominant approach to change was examined and categorized in terms of the above model. The stories from the informants were then mapped onto the overall model. The results of this analysis are shown in Figure 8.

In reviewing the initial change stories it was evident that the stories indicated a trend of movement away from 'directive' change and towards a more emergent approach. Furthermore analyses of the stories suggested that the relatively simplistic model, based on two axes, provided too limited a method of capturing the complexity and diversity of the ways in which changed happened in practice. The data indicated (tentatively) that each quadrant in the model in Figure 8 could be seen as being subdivided, based on the actual proximity to each axis. With this thought in mind, and having debated it with a number of the participants, two further axes were identified. These were labelled as being: (1) systemic versus opportunistic (i.e. system-wide and planned versus responsive to opportunities); and (2) high control versus low control (i.e. the extent to which the change is controlled and directed on a top-down basis). On reflection this analysis

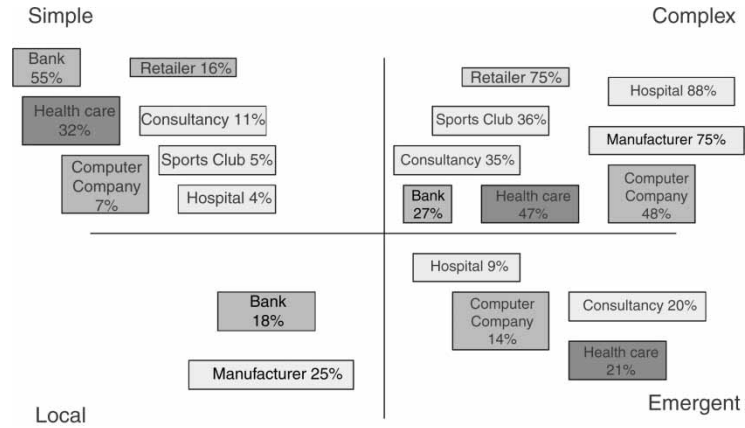


Figure 8. Participant stories mapped onto the change “Quadrant” (% = Percentage of change stories coded to quadrant)

appeared to make greater sense in the context of the diverse literature (see above). The overall model resulting from the inclusion of these dimensions is shown in Figure 9. In reviewing this with participants there emerged an acceptance that it captured the realities of their experiences and potentially made a great deal of sense. However, in practice they felt that exploring the simpler model would provide data to enable them to mobilize support and release resource for a more detailed study to explore the more complex model.

Follow-up Qualitative Analysis

As a result of the additional stories, and more detailed content analyses of the data, some evidence was apparent of an emerging pattern of the relationship between change approaches and success, as well as illustrations of the way in which approaches within the above model occur in practice.

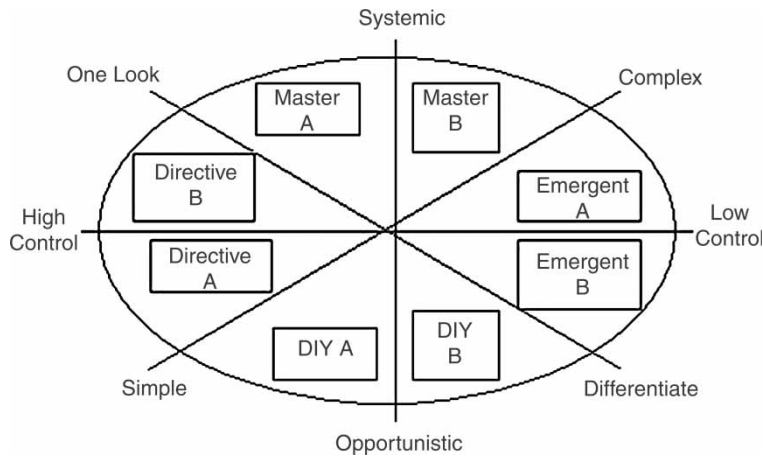


Figure 9. Expanded change model

In general the style labelled as directive was contained within many of the stories that ended in unsuccessful change implementation within any context. Some informants described an underlying assumption that fast and fundamental change required a fast, top-down and relatively simplistic approach. The recognition of greater complexity encompassed within the 'master' approach together with the resultant higher levels of involvement, led to change implementation seen by informants as more successful. This was particularly notable where the change time scale was relatively long term and the organization had a history of implementing many changes.

The model in which change is implemented on the basis of being linear and relatively simple, but implemented by providing change agents with 'tool kits', is referred to above as a DIY approach to change. However, in cases employing this approach, the results were ultimately unsuccessful.

Much of the complexity and evolutionary theory literature outlined above suggests the importance of viewing organizational change as an emergent process. There were numerous examples of successful changes, described by informants, which contained elements of the 'emergent' change approach. However, what was initially, surprising was that this approach was associated with success in relatively short-term as well as long-term change.

Leadership

In reviewing the transcripts for evidence of leadership behaviours, what was immediately apparent was that a very leader-centric approach, entailing the leader driving the change through personal involvement, persuasion and influence, did not appear to be related to success in any of the contexts. In general the impact of such leadership behaviours appeared to mitigate against success. In contrast to this, success appeared to be related to leadership that might be described as more facilitative and enabling (Higgs, 2003). Some examples of success appeared to be related to the leader building a 'container for change' (Litchenstein, 1997) and to the idea of the leader building the capability to change in others (Conner, 1998). What was also evident, from the analyses of the transcripts, was that differing approaches to change appeared to place differing emphasis on the types of leadership behaviours involved.

In order to explore leadership behaviours the transcripts were content analysed to identify emerging themes relating to leadership (Denzin and Lincoln, 2000). Some nine categories were identified which were:

- (1) What leaders say and do. The communication and actions of leaders related directly to the change.
- (2) Making others accountable.
- (3) Thinking about change.
- (4) Using an individual focus.
- (5) Establishing 'starting points' for change.
- (6) Designing and managing the change journey.
- (7) Communicating guiding principles.
- (8) Creating individual and organizational capabilities.
- (9) Communicating and creating connections.

In discussing the results of all of the initial analyses with participants (the quadrants and leadership factors), there was some surprise at the apparent power of emergent change in terms of its relationship with success. Equally there was surprise that the approach labelled as DIY change had no single relationship with success. In discussing the apparent failure of directive change, while conceptually understanding this, they did feel that there might, in practice, be circumstances in which it could work. These concerns led them to inquire as to whether or not the data could be analysed in any way that would illustrate the strengths of the relationships that had emerged from the analysis. They also raised questions about the link between leadership behaviours and the emergence of any patterns of such behaviour, together with linkages between these, change approaches and the relative success of change interventions. In response to these inquiries it was agreed that the research team would revisit the transcripts, and the coding of them, to use this as a basis for quantifying the data. This quantified data could then be analysed using statistical techniques for exploratory purposes (Parry and Meindl, 2000).

Quantitative Analyses

The unit of analysis for this step in the study remained the change story. Thus the sample for the quantitative analysis was 70. This provided a large enough sample for exploratory analyses including multivariate analyses (Hair *et al.*, 1995; Wright and Fowler, 1986). The dependant variable for the majority of the analyses was the success of the change intervention. Initially there were some 20 independent variables (four change approaches, nine leader behaviours and seven contextual factors). Given the sample size this was felt to limit the applicability of a number of potential analyses.

As the participants were interested in patterns of leadership behaviour it was felt to be appropriate to conduct a factor analysis of the nine leadership behaviour items. This, in practice, reduced the nine items to three factors (see below). The extent to which the contextual items were differentiating factors was explored through a series of *t*-tests. This analysis revealed that the individual: team contextual factor did not differentiate and could therefore be omitted from a number of the subsequent analyses. As a result of these actions the number of independent variables was reduced to 13.

It is important to emphasize that the design for the qualitative analysis was exploratory rather than hypothesis testing (Hair *et al.*, 1995; Wright and Fowler, 1986; Norusis, 1994) and the purpose was to provide indications of the relative strength of relationships identified in the qualitative stage of the study. This limited generalizability of the results (Parry and Meindl, 2000). The key finding from these analyses are summarized below.

Factor Analysis

The nine leadership behaviours were subjected to an exploratory factor analysis employing the principal components method with a Varimax rotation. The factor structure that emerged is shown in Table 1. As the research was exploratory it was decided to examine the structure that emerged employing alternative rotations (Oblimin, Quartimax and Equimax). Both the Quartimax and Equimax rotations produced almost identical solutions to the Varimax model. The Oblimin rotation produced an identical

Table 1. Factor analysis of leadership

Rotated component	Component			Total
	1	2	3	
Leaders do	0.885	0.088	-0.093	
Others accountable	0.680	0.499	0.074	
Create accountability	0.330	0.218	0.617	
Create connections	-0.151	0.198	0.753	
Change start points	0.187	0.733	0.286	
Shaping journey	0.037	0.891	0.117	
Change thinking	0.817	-0.041	0.154	
Guiding principles	0.290	0.490	-0.518	
Individual focus	0.746	0.255	-0.162	
% Variance	30.26	22.02	15.3	67.6

Extraction method: Principal Component Analysis. Rotation method: **Varimax** with Kaiser no realisation rotation converged in 5 iterations.

set of items for factor 1, but a slight difference for factors 2 and 3. Examination of the items in each factor in the Variamax, Quartimax and Equimax solutions showed a consistency in terms of the behaviours that had been grouped together. Furthermore, inspection of the items within each factor showed them to be conceptually understandable (Hair *et al.*, 1995). The overall labels for the three factors which emerged and items comprising them were:

Factor 1: shaping behaviour

- (1) What leaders say and do.
- (2) Making others accountable.
- (3) Thinking about change.
- (4) Using an individual focus.

Factor 2: framing change

- (1) Establishing 'starting points' for change.
- (2) Designing and managing the change journey.
- (3) Communicating guiding principles.

Factor 3: creating capacity

- (1) Creating individual and organizational capabilities.
- (2) Communicating and creating connections.

Correlational Analyses

The relationships between the four change approaches, three leadership factors and the success of the change are summarized in Table 2. From Table 2 it is evident that shaping behaviour as a leadership style, is counter productive in terms of achieving successful change. Similarly creating capacity, while not significant at the 0.05 level, is

Table 2. Change approaches leadership factors & success of change ($n = 70$)

	Success
Shaping behaviour	– 0.366
Framing behaviour	0.133
Creating capacity	0.352
Directive change	–0.101
Master change	0.167
DIY change	–0.117
Emergent change	0.175

still significantly related to success. The change approaches are not significantly related to success. However, it is interesting to note that both directive and DIY approaches are negatively related to success. The differing contexts of the change could (from the literature) potentially require different approaches and leadership behaviours. Therefore, it is important to explore the relationships within these differing contexts. Table 3 shows the relationships between the contextual variables and both the leadership factors and change approaches. From this table it is clear that there are a number of relationships between the contextual variables, leadership factors and change approaches. Thus further investigation of success, controlling for contextual variables appears warranted. Turning to the detail within the table it appears that shaping behaviour is more likely to be encountered in low-scope, low-magnitude and internally-driven change. This could be seen as relatively local leader-led change. Framing change appears to be more likely to be encountered in short time scale, high-scope, high-magnitude and externally-driven change (i.e. large-scale changes responding to external events). Creating capacity is more likely to be related to changes in organizations with a long history of change, with long-term and internally-driven change. Less strong patterns emerge in reviewing change approaches. Directive change is likely to be encountered within organizations with a relatively short history of change. This does tend to make some sense as it is perhaps the most common theoretical model (see above) and one likely to be employed in organizations with little experience of managing changes. Master change tends to be associated with complex, externally-driven change. Again this makes some theoretical

Table 3. Correlations between contextual variables, change approaches and leadership factors ($n = 70$)

	Contextual Variables					
	History	Timescale	Scope	Complexity	Magnitude	Source
Shaping behaviour	0.068	0.250	– 0.451	–0.189	– 0.396	– 0.372
Framing behaviour	–0.239	– 0.367	0.455	0.084	0.382	0.480
Creating capacity	0.345	0.346	–0.209	0.106	–0.161	– 0.370
Directive change	– 0.507	–0.119	0.025	–0.119	–0.024	0.012
Master change	0.258	0.209	0.267	0.431	–0.210	0.463
DIY change	–0.063	0.226	–0.133	–0.166	–0.192	0.252
Emergent change	0.231	0.339	–0.038	0.073	–0.005	– 0.431

sense since master change lies at the complex end of the simple: complex axis in the model presented in Figure 4. DIY change appears independent of context. Emergent change would seem to be associated with long-term internally-driven change. This does not appear too surprising given the literature on emergence outline above. However, while Table 3 provides a degree of support for the overall change model (Figures 4 and 5), it does not address linkages with success in differing contexts. This warranted further investigation, the results of which were presented in the sections below using partial correlations and regression.

The correlation relationships between the leadership factors and change approaches were explored in order to address the question about relationships raised by participants (see above). These are summarised in Table 4. There are no statistically significant relationships between leadership factors and change approaches emerging from this analysis. It is evident that elements of each factor are employed within each approach. However, the respective mix of the factors may be explored through ranking the correlation co-efficients. This produces the profile shown in Figure 10. From this it is evident that each approach encompasses a different profile in terms of the relative dominance of the leadership factors.

Partial Correlations

In order to explore the relationships between the leadership factors, change approaches and success of change in different contexts a series of partial correlations were conducted. Each partial correlation analysis controlled, in turn, for all but one of the contextual variables. The results of these analyses are summarized in Table 5, with Table 6 showing the amount of variance explained by each correlation in Table 5. In conducting the analyses the sample was split at the mean for each contextual variable and partial correlations conducted for each subsample. From a review of the data presented in Table 5 the following observations may be made:

- (1) The leadership factor of shaping behaviour appears to be negatively related to success in most contexts.
- (2) Framing change appears to be related positively to success in high-scope, high-magnitude, short-term, individually-led change contexts. However, it is a leadership style that could be seen as inappropriate for internally-driven, long-term change in organizations with a long history of change.

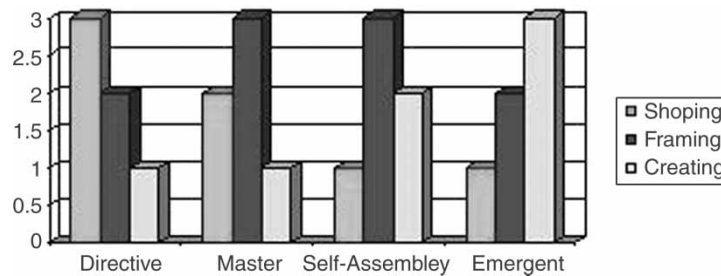


Figure 10. Mix of leadership factors

Table 5. Partial correlation analysis summary of correlations with success

Contextual variables											
External source	Internal source	Hi complexity	Hi scope	Low scope	Hi magnitude	Low magnitude	Hi history	Hi time	Low time	Hi individual focus	Low individual focus
-0.56	0.08	-0.29	-0.71	-0.06	-0.73	-0.07	-0.14	0.35	-0.57	-0.42	-0.5
0.51	-0.34	0.05	0.64	-0.28	0.72	-0.25	-0.39	-0.73	0.55	0.17	0.5
-0.13	0.4	0.23	-0.24	0.54	-0.49	0.48	0.52	0.67	-0.18	0.24	-0.1
-0.48	0.24	-0.11	-0.65	0.24	-0.69	0.21	0.12	-0.06	0.01	-0.27	0.0
0.05	0.28	0.1	-0.01	0.37	-0.45	0.12	0.31	0.46	0.12	0.12	0.1
-0.13	-0.21	-0.29	-0.52	-0.1	-0.66	-0.11	-0.25	-0.26	-0.18	-0.26	-0.1
0.37	0.13	0.13	0.05	0.22	0.57	0.2	0.27	0.06	0.17	0.14	0.1

Bold = Significance < 0.05.

Bold and italics = Significance < .10.

n.b. no significant relationships encountered for either low complexity or short history (experience) of change.

Table 6. Partial correlation analysis: correlations with success: variance explained

Contextual Variables											
External source	Internal source	Hi complexity	Hi scope	Low scope	Hi magnitude	Low magnitude	Hi history	Hi time	Low time	Hi individual focus	Low individual focus
0.31	0.01	0.08	0.50	0.00	0.53	0.00	0.02	0.12	0.32	0.18	0.3
0.26	0.12	0.00	0.41	0.08	0.52	0.06	0.15	0.53	0.30	0.03	0.3
0.02	0.16	0.05	0.06	0.29	0.24	0.23	0.27	0.45	0.03	0.06	0.0
0.23	0.06	0.01	0.42	0.06	0.48	0.04	0.01	0.00	0.00	0.07	0.0
0.00	0.08	0.01	0.00	0.14	0.20	0.01	0.10	0.21	0.01	0.01	0.0
0.02	0.04	0.08	0.27	0.01	0.44	0.01	0.06	0.07	0.03	0.07	0.0
0.14	0.02	0.02	0.00	0.05	0.32	0.04	0.07	0.00	0.03	0.02	0.0

- (3) The leadership factor of creating capacity appears to be related to successful change implementation in contexts entailing internally-driven, high-scope, low-magnitude and long-term change.
- (4) A directive approach to change does not appear to be related to success in any context.
- (5) Master approaches to change appear to be successful in contexts of low-scope and long-term change programmes
- (6) DIY change appears to be negatively related to success in all change contexts
- (7) Emergent change appears to be particularly important to success in contexts of high-magnitude change.

These findings do not tend to produce many unsurprising results. However, the interaction between different aspects of the change process (e.g. the leadership approach and context) warrant further investigation.

Regression Analyses

To explore the data further a series of regression analyses were conducted. Separate analyses of leadership factors and change approaches on success explained 25 and 32 per cent of the variance in success, respectively. However, the earlier analyses have shown both interactions between leadership factors and approaches and both of these with differing contexts. Using the partial correlations and interview transcripts as a guide we identified four combined contexts that appeared to reflect the change scenarios presented in the stories that had been gathered. These were:

- (1) Externally-driven, high-magnitude change to be implemented in a relatively short time scale.
- (2) Long-term change which is internally driven in organizations with a long history of change activities.
- (3) High-magnitude change impacting on many parts of the organization, needing to be implemented in a relatively short time scale
- (4) High-magnitude change to be implemented over a relatively long time scale.

In reviewing the interviews and partial correlation analyses it was hypothesized that an Emergent change approach would be most effective in scenarios (1) and (2). Similarly for scenario (3) it was hypothesized that the leadership factor of framing change would be most effective. No clear patterns had emerged for scenario (4) and thus there were no hypothetical order for the leadership factors or change approaches. In order to explore these scenarios multiple regressions, including interaction items (with the selected contextual variables), were conducted using a step-wise approach. The largest regression model on this basis had 22 variables. This meant that, for a sample of 70, there were just over three cases per variable. While this falls short of commonly accepted minima, Hair *et al.* (1995) indicate that three cases per variable can be acceptable in exploratory research. The results of these analyses are summarized in Table 7. From this it is evident that an Emergent approach to change was the most effective in both scenarios (1) and (2) accounting for 18.7 and 11.2 per cent of the variance in success, respectively. In scenario (2) it had been hypothesized that a DIY approach to change would be the least effective. The results from Table 7 suggest that this was not the case and in such a

Table 7. Regression analyses: summary

	Hi mag, Short time, external source			Long time, internal source, long history	
	R	% Variance rank		R	% Variance rank
Change models					
Emergent	0.432	18.7	1	0.33	11.2
Master	0.397	15.7	2	0.33	10.9
Directive	0.385	14.8	3	0.27	7.5
DIY	0.361	13	4	0.32	10.5
Hi mag, short time, hi scope					
	R	% Variance rank			
Leadership factors					
Framing	0.664	41.5	1		
Shaping	0.469	22	3		
Creating	0.489	23.9	2		
Hi mag, long time					
	R	% Variance rank			
Models and factors (no hypothesised order)					
Framing	0.471	22.2	1		
Behaviour					
Creating capacity	0.383	14.7	2		
Emergent	0.326	10.6	4		
Master	0.342	11.7	3		

scenario, directive change is the least effective. Turning to scenario (3) it had been hypothesized that the leadership factor of framing change would be the most effective and the results confirmed this indicating that this factor accounted for 41.5 per cent of the variance in success. In high-magnitude, long-term change the results indicate that the leadership factor of framing change again accounts for the largest variance in success (22.2 per cent). The impact of including the interaction items in the regression analyses was explored by comparing variances with and without interaction. The results of this analysis are summarized in Table 8. From this it is evident that in all scenarios the inclusion of the interaction items had improved the amount of variance in success explained. While the inclusion of additional variables per se can impact on variance, as a statistical consequence of a larger number of variables, the results do provide some support for the view that the effectiveness of change approaches and leadership factors do vary with the context in which the change is occurring.

Overall Summary of Findings

In reviewing the qualitative and quantitative findings together there appeared to be (unsurprisingly) a great deal of consistency. Each of the main quantitative findings

Table 8. Regression Improvements

	Hi mag, short time, external source			Long time, internal source, long history		
	% Variance no interaction	% Variance interaction	% Change	% Variance no interaction	% Variance interaction	% Change
Change models						
Emergent	13.8	18.7	36.00	11.1	11.2	
Master	11.8	15.7	33.00	5.9	10.9	
Directive	10.4	14.8	42.00	7.1	7.5	
DIY	9.9	13	31.00	9.5	10.5	
	Hi mag, short time, hi scope					
	% Variance no interaction	% variance interaction	% Change			
Leadership factors						
Framing	27.1	41.5	53.1			
Shaping	17.1	22	28.7			
Creating	17.1	23.9	39.8			
	Hi mag, long time					
	% Variance no interaction	% Variance interaction	% Change			
Models and factors (no hypothesised order)						
Framing	9.1	22.2	144.0			
Behaviour						
Creating	14.3	14.7	2.8			
Capacity						
Emergent	9.6	10.6	10.4			
Master	11.7	11.7	0.0			

could be matched to qualitative data within the transcripts. Bringing together all of the analyses leads to the emergence of the following findings from this study:

- (1) In high-magnitude change (i.e. change that impacts a large number of people and entails changes to multiple parts of the system) the most effective change approach is an emergent one (partial correlation indicated that emergent change accounted for 32 per cent of variance in success in this context). The leadership factor that accounted for the highest variance in success in this context was framing change (accounting for some 52 per cent of the variance).
- (2) In short-term change (i.e. change which needs to be implemented in 12 months or less) impacting on a large number of people in the organization the leadership behaviours are critical to success. The set of behaviours encompassed within the factor framing change appear to be the ones most likely to lead to successful implementation (framing from the regression analysis accounted for 42 per cent of the variance of success in this scenario).
- (3) Change is a complex activity. Those approaches identified as being underpinned by assumptions at the simple end of the simple: complex axis shown in Figures 4 and 5 (e.g. directive change and DIY change) are less effective in most scenarios than those which recognize the underlying complexity of the phenomenon (e.g. master and emergent approaches). Indeed examination of the partial correlations indicates negative correlations between both directive and DIY approaches and success in most contexts.
- (4) An emergent approach to change appeared to be more successful than any of the other three change approaches in most contexts. Analyses of both partial correlations and regressions, indicates that an emergent approach explains greater proportions of variance in success. However, informants were often describing an emergent approach from an intuitive rather than theoretically informed perspective. From the interviews it was apparent that the emergent approach occurred in the context of a change framework that was more planned and structured. It is feasible, from this data to propose that the emergent approach describes how change actually happens as opposed to how change is articulated.
- (5) Leadership behaviours that centre on the position, role and power of the leader and their abilities (e.g. those behaviours captured by the factor shaping behaviour) do not appear to be related to the success of a change intervention. Indeed, both from the qualitative data and the partial correlations, such behaviours can impair the success of an intervention.
- (6) An approach to change that is both simplistic and widely differentiated (see Figures 4 and 5, i.e. a DIY approach) appears to be unsuccessful in any context. Change stories from the informants provided evidence that what was referred to as 'tool kit' change consistently failed to support the required direction of change. Furthermore, the partial correlations showed a large number of negative relationships between DIY approaches and success across a wide range of contexts.
- (7) In long-term change initiatives (e.g. those with a time horizon of more than 18 months), and within organizations facing continuing change, a master approach combined with leadership behaviours which are captured in the factor creating capacity appears to be an effective strategy. Evidence from the interviews pointed to the importance, in such contexts, of creating an overall framework for the change

and developing both individual and organizational capacity for change. Partial correlations also supported this view showing that a master approach accounted for 21 per cent of the variance in success in long-term change and the leadership factor Framing change accounted for 45 per cent of the variance in success in long-term change and 27 per cent in change contexts with a long history (e.g. continuous change and adaptation).

- (8) It is important to consider both change approaches and leadership behaviours within the context of any change initiative. The diversity of the change stories associated with success was, in part, explained by the diversity in contexts. Furthermore, the regression analyses demonstrated, to an extent, that interaction between both the approach to change, leadership factors and contexts led to increased levels of variance in success being accounted for.
- (9) There is a relationship between change approaches and leadership behaviours. However, it is one of differing balances rather than absolutes. All leadership factors were described, in interviews, within each change approach. However, the dominance varied. This was supported by the quantitative data that suggested differing profiles of each of the three leadership factors within each of the four change approaches.

Discussion

Taken overall the findings from this study provide empirical support for many of the theories and conjectures emerging from a review of the literature. The view that top-down programmatic change does not work (e.g. Pascale, 1999; Senge, 1997; Buchanan *et al.*, 1999) is endorsed to some extent. Certainly the findings have shown that a directive approach to change is ineffective across most contexts. However, the master approach (which is planned and seeks uniform implementation) was found to be effective in the context of long-term initiatives in an environment of continuous change. It is perhaps the underlying mind-set of a master approach, which recognizes greater complexity associated with change, which explains this. Indeed the simple: complex axis of the model in Figures 4 and 5 appears, from this study, to be the more significant in terms of understanding the relative success of change approaches. The data from the study, and key findings appear to provide relatively clear evidence to support the view that recognition of the complexity of change is important to the formulation of effective change strategies (Litchenstein, 1996; Wheatley, 1992; Stacey, 1996; Balagun *et al.*, 2003). Analyses of the change stories provided evidence of the unintended consequences (often negative) of change approaches that were linear and relatively simplistic. This provides endorsement for the view that it is difficult to predict outcomes in complex environments (Pascal, 1999; Buchanan *et al.*, 1999; Sammut-Bonnici and Wensley, 2002).

In exploring the change approaches that acknowledge the greater complexity of the process it was somewhat surprising that the emergent approach appeared to be so strongly related to success in so many contexts. In particular its apparent effectiveness in the context of implementing relatively short-term change was surprising as many have asserted that a more emergent approach to change takes longer to deliver results (Shaw, 1997; Robinaud, 1999; Weich, 1995; Metcalfe *et al.*, 2000). However, what was apparent from the interviews was that the approaches to change which were categorised as emergent were not articulated as such or based on any tacit theoretical model or framework. In many

cases the stories, in this vein, presented by the informants were of somewhat unstructured and 'messy' activities and interventions. This observation aligns closely with that made by Shaw (1997) who observed that change becomes very 'messy' when moving from a planned approach to a complex adaptive systems perspective. Although the emergent stories were not structured, the interviews revealed a number of similarities in terms of:

- (1) Micro-level interventions.
- (2) Interventions involving individuals or small groups outside of the mainstream of the organization.
- (3) Explicit experimentation.
- (4) Establishing unusual or unexpected connections as a means of both sharing learning and transferring new behaviours.
- (5) Working through informal networks and alliances.

Reviewing these similarities provides endorsement for much of the writing on complexity and evolutionary theory as a means of understanding organisational change (Wheatley, 1992; 1993; Litchenstein, 1996; Metcalfe *et al.*, 2000; Shaw, 1997; Depew and Weber, 1995). Specifically the impact of individual or small groups outside of the mainstream of the organization resonates with the dual nature of evolution proposed by Sammut-Bonnici and Wensley (2002) and Depew and Weber (1995).

What was noteworthy about many of the emergent change stories was that the emergent behaviours and activities frequently occurred in the context of, or in response to, a more structured and planned change initiative which was 'floundering' or going off course. Frequently a specific event or outcome triggered a different approach, behaviour or an experiment. This data may be seen as providing further evidence to support the three-stage model of intervention proposed by Litchenstein (1997). It may well be seen that the experiences of the initial change process provided the 'container for change' and basis for building relationships with the 'floundering' events indicating the 'threshold at the edge of linear logic' referred to by Litchenstein as the first two of the three intervention stages.

The findings from this study certainly endorse the complexity and evolutionary perceptions of change. However, following this line is unlikely to produce a new theory of change per se but rather, as proposed by Sammut-Bonnici and Wensley (2002), can provide a powerful tool for understanding the change process. Indeed if the evidence of the study is supported in future research we should not be seeking a prescriptive theory of change but rather, in the spirit of complexity theory, should look for a broad general direction and a small number of simple guiding rules (Reynolds, 1987; Wheatley, 1992, 1993). To an extent, therefore, the model to describe change approaches (described in Figures 4 and 5) should not be seen as definitive but more as a lens through which we can attempt to make sense of the change process (Weick, 1995). Furthermore, we should perhaps be cautious in the use of the quantitative findings from this study viewing them as provocations for further inquiry rather than definitive or absolute.

Turning from the change approaches to the leadership behaviours the study does again challenge some of the more 'traditional' thinking about change leadership. However, the study findings are not unique in doing this. Higgs (2003) points to evidence demonstrating that leadership effectiveness is increasingly moving away from leader-centric and top-down models. Similarly, Alimo-Metcalfe (1995) has pointed to the importance of a more supportive model of leadership being necessary within a transformational context.

Thus it is perhaps unsurprising that the group of leadership behaviours clustered within the shaping behaviour factor in this study were not effective in supporting successful change. The emergence of the cluster creating capacity and its apparent success in more complex change contexts, finds some support from the work of Conner (1999) who highlights the importance of the leaders ability to build the capability to change and adapt and embed this in an organization. Similarly other more recent leadership research has highlighted the criticality of the leaders' role in developing individual capability (Kouzes and Posner, 1998; Higgs, 2003; Higgs and Rowland, 2000, 2001; Goffee and Jones, 2000). Within a change-specific context Higgs and Rowland (2000, 2001) identified a cluster of change leadership competencies concerned with coaching and developing others. In addition Giglio *et al.* (1998) emphasize the importance of the leaders coaching role in the change process. However, the creating capacity leadership factor encompasses behaviours beyond building individual capability and include enhancing organizational capacity. Thus it may be seen as more closely aligned to Conner's (1999) view of building capability.

The third of the leadership factors emerging from this study (framing change) has fewer parallels in the literature than the other two. While its non-directive and facilitating nature does find some support from the literature (Kouzes and Posner, 1998; Alimo-Metcalfe, 1995; Collins, 2001; Higgs, 2003) the more change-focused behaviours (including journey design) are more specific. The change leadership competency model described by Higgs and Rowland (2000, 2001) does include journey design. It also (as do others such as Kotter, 1998) includes a competence associated with making the case for change. However, the Framing change factor goes beyond making the case to include establishing the boundary conditions and, in a sense, creating what Litchenstein (1997) referred to as a 'container for change'. Perhaps this behavioural cluster also captures the role of the leader as sense maker (Weick, 1995). In this context the leader is concerned with the creation of meaning, thus being a 'sense giver' as well as a sense maker (Weick, 2003).

Conclusion

This article set out to answer the following three research questions:

- (1) What approach to change management is likely to be the most effective in today's business environment?
- (2) What leadership behaviours tend to be associated with effective change management?
And
- (3) Are leadership behaviours related to the underlying assumption within different approaches to change?

In examining the first of these questions what is clear from the study is that approaches to change which fail to take account of complexity are unlikely to be successful in any change context. Those approaches that take account of and integrate complexity do appear to be more effective. In particular an approach informed by complexity theory (i.e. emergent change) appears to be effective within a range of change contexts. However, the study has demonstrated the importance of the interaction between the change approach and the change context.

The article has provided some evidence that certain combinations of leadership behaviours appear more effective than others in change situations. Thus, in responding to

the second question it does appear that leadership behaviours grouped into approaches referred to, as framing change and building capacity are more successful than those grouped as a factor labelled shaping behaviour. Indeed, shaping behaviour does appear to inhibit the success of change initiatives in all of the contexts examined. This conclusion is not surprising given developments in the broader leadership literature. Within this literature a move from leader-centric, directive behaviours to more facilitating and enabling styles are asserted to be associated with success (Higgs, 2003; Kouzes and Posner, 1998; Gill, 2002). However, once again the study illustrates the significance of interaction with the change context.

In relation to the third question the evidence from the study demonstrates that the same range of leadership behaviours are exhibited within each of the four change approaches examined. However, the dominance of each set of behaviours varies notable within each approach. Interestingly the dominance patterns show that shaping behaviour is the most frequently used leadership in directive change thus indicating the impact of underlying assumptions on leadership behaviours.

Overall the article provides further evidence to support claims in the literature that centrally planned changes based on assumptions of linearity fail to achieve their aims (Sammut-Bonnici and Wensley, 2002; Stacey, 1996; Harris and Ogbonna, 2002; Senge, 1997). Furthermore, evidence is presented to support the view that complexity and evolutionary theories proved a more useful framework for understanding the process of change (e.g. Litchenstein, 1996, 1997; Aldrich, 1999; Depew and Weber, 1995). However, this conclusion in itself does present a dilemma for organizations. The tenets of these theories are rooted in views of the unplanned nature of change and consequent challenges for the leadership and management of the process. The broad principles of complexity, outline by Reynolds (1987) represent a form of 'container' for the change with a general direction. Moving to such an approach may prove difficult for organizations rooted in rational Weberian mind-sets associated with planning, direction and control (Johnson, 2001).

These conclusions clearly have implications for organizations and those involved in leadership roles. If findings from this study are corroborated through further research and practitioner experience, then organizations could well need to re-think their assumptions about change and its implementation. A more emergent approach requires less centralization and a focus on creating the environment with which emergence can function. In addition, leaders will need to be helped to understand their role within this context.

Limitations

It is important to acknowledge the limitations of this article. Overall it falls within the area of case study research and is cross-sectional. Although exceeding the minimum number of cases for generating theory proposed by Eisenhardt (1989) there are inherent limitations in terms of the ability to generalize the findings (Yin, 1994). Cross-sectional research is limited in the generalizability of its findings when studying longitudinal phenomena. The quantification of qualitative data and subsequent application of statistical techniques is a relatively new approach to data analysis and given the source of both qualitative and quantitative data is identical there can be no claims of triangulation. Furthermore, the sample size for a number of the statistical analyses

was relatively small and precluded the examination of a range of interactions between variables. Finally the informants were all in leadership roles and the stories therefore reflected their perceptions that were not corroborated by others involved in the change.

Further Research

In addition to areas for further research identified by participants the authors have identified the following areas for further research (in part informed by the limitations of the study):

- (1) Extending the range and nature of organizations studied in order to explore the feasibility of generalizing the findings and generating larger numbers for quantitative analyses.
- (2) Corroborating the stories from informants (who were in leadership roles) by exploring the stories with other informants who were involved in or affected by the change, but not in a leadership role.
- (3) Establishing a project to follow a change over time and exploring the extent to which the findings are endorsed in practice (e.g. by using learning histories within organizations).
- (4) Exploration of the possibility that effective change may require a blend of approaches within an organisation rather than adoption of a single approach.
- (5) Exploration of the '8 part model' illustrated in Figure 9.

Overall we believe this study has made a contribution to the gaps in the change literature and in particular, to the lack of empirical studies (Litchenstein, 1996; Wheatley, 1992; Brown and Eisenhardt, 1998). Furthermore, we hope that the illustrations of a collaborative design will encourage others to explore this approach.

It is anticipated that a number of the above areas for further research may be pursued within the collaborative research framework. The findings and conclusions have certainly provoked interest in further inquiry amongst participants. The authors hope that this article will also stimulate interest among other researchers and potentially engage further participants in further studies.

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Appendix

In reviewing our original findings, both based on our own experience and conversations with our 'collaborators', we recognized that changes occur in a variety of contextual settings. Based on our reflections, conversations and an analysis of our data, we identified a range of contextual variables.

The purpose of these contextual variables was to enable analyses of the leadership factors and change approaches above within different contextual environments. The seven contextual variables we identified were:

- History of change: this coded the experience of the people implementing the change – high experience of change work; low experience of change work.
- Scope of change: the number of people impacted by the change – large group; small group.

- Complexity of change: the number of levers used in the change – low complexity/low number of levers applied to the change; medium complexity; and high complexity/high number of levers applied to the change.
- Magnitude of change: a calculation of the scope (per above) multiplied by the complexity of the change (per above) to determine the magnitude of the change.
- Time scale: the length of the change project time period with each story – up to 12 months; up to 18 months; over 18 months.
- Source of change: this coded the change project into internally directed change i.e. internal to a division within the organization; externally directed change that is still driven from within the organization; and impacting whole organization; and externally directed change from a third party source, e.g. government directed change.
- Individual or team led: change implementation led by an individual leader or whether the change implementation was led by a team.

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