

'UNFREEZING-CHANGING-REFREEZING' OF ACTORS' COMMITMENT: THE TRANSITION FROM ESCALATION TO DE-ESCALATION OF COMMITMENT TO INFORMATION TECHNOLOGY PROJECTS

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Abstract

Escalation is a common and costly problem among IT projects. Although the potential of de-escalation of commitment to failing courses of action has been much heralded, many such efforts may result in failure due to constituencies biasing facts in the direction of previously accepted beliefs, and therefore, prevent an organization from de-escalating. Here, we adopt Lewin's change framework to examine the commitment transformation during the transition from escalation to de-escalation of an e-procurement project in a local government organization in UK. Our findings suggest that the entire process of 'unfreezing-changing-refreezing' was enacted through the deployment of behaviour disconfirmation, psychological safety creation, and development, alignment and integration of new attitudes and behaviours. The research and practical implications of these findings are explored.

Keywords: Escalation of commitment, de-escalation of commitment, Lewin's change theory.

1 INTRODUCTION

This paper is about de-escalation of commitment to information technology (IT) projects; more specifically, it addresses the all too common failure of such efforts to overcome commitment to present failing course of action and accept alternative course of action. The problem of escalation of commitment to IT projects has attracted tremendous attention in recent years (Newman and Sabherwal, 1996; Keil, 1995). This may be explained by the alarming findings from the Standish Group's 1998 survey, which indicates that 74 percent of software projects were behind schedule and over budget - a behaviour underlying the phenomenon of escalation of commitment to a failing course of action (Brockner, 1992). The high incidence of software projects exhibiting the escalating phenomenon is due to a combination of many different factors categorised as project, psychological, social and organizational factors (Staw and Ross, 1987).

Experts have suggested that the most effective way to eradicate the phenomenon of escalation of commitment to IT projects is through de-escalation of commitment (Keil and Robey, 1999). Keil and Robey (1999, p.65) define de-escalation of commitment as 'the reversal of escalating commitment to failing courses of action, either through project termination or redirection'. This implies that troubled projects must be detected as early as possible so that corrective actions can be taken before the project conditions worsen. However, despite the significant role played by de-escalation of commitment in unlocking the escalation entrapment, there has been a paucity of research on de-escalation of commitment in the information systems (IS) area (Heng et al., 2003). Particularly, little is known about the process of how actors alter their commitment from present failing course of action to an alternative course of action, during the transition from escalation to de-escalation. This paper argues that understanding actors' commitment transformation processes during the transition is extremely important for consensus building among various stakeholders toward the alternative course of action, a criteria essential for carrying out any exit strategy (Montealegre and Keil, 2000).

Specifically, this paper draws from the literature on Lewin's (1951) theory of change to explore the dynamic process of commitment transformation during the transition from project escalation to de-escalation in an organizational setting. Against such a backdrop, we undertook exploratory research into a case study of an electronic procurement (e-procurement) development project in a regional UK metropolitan borough council (UKC) (a pseudonym). Our two research questions are: 1) what are the inertias that inhibit actors from overcoming their commitment to the failing course of action? And 2) what are the drivers that enable actors to accept alternative courses of action? We will address the two research questions in subsequent sections.

2 THEORETICAL FOUNDATION

2.1 Escalation of Commitment to a Failing Course of Action

Escalation of commitment is a phenomenon which refers to situations where decision makers commit additional resources to a failing course of action (Staw and Ross, 1987). The escalation phenomenon has been explained using several theories. Among the theories, self-justification theory (Brockner, 1992) and the prospect theory (Whyte, 1986) provide the most complete explanation of the escalation phenomenon. Based on the theories, Staw and Ross (1987) develop four types of determinants of commitment, namely, project, psychological, social and structural. These determinants have been used to explain the escalation phenomenon in various settings (Newman and Sabherwal, 1996; Ross and Staw, 1993).

The phenomenon of escalation of commitment is also widely observed in IS projects as Keil and Mann (1997) report that up to 30 to 40 percent of IS projects have some degree of escalation of commitment to a failing course of action. A review of the IS literature reveals several IT projects that exhibit

escalation of commitment. The Taurus project (Drummond, 1996), the CONFIG project (Keil, 1995), Centco (Newman and Sabherwal, 1996) and the Denver international airport (Montealegre and Keil, 2000) are just a few prominent examples of escalating situations identified in IS settings. To alleviate the impacts of project escalation, Keil and Robey (1999), suggest an effective way of reducing commitment to a failing course of action, which is through de-escalation of commitment to a failing course of action.

2.2 De-escalation of Commitment to a Failing Course of Action

To date, research on de-escalation of commitment is relatively limited (Drummond, 1995). Most of the studies are conducted in non-IS settings (Ross and Staw, 1993) and only very few are related to IT projects (Keil and Robey, 1999; Montealegre and Keil, 2000; Heng et al., 2003). Keil and Robey (1999) and subsequently, Montealegre and Keil (2000) have provided a very useful summary of triggering activities and conditions that can promote de-escalation. Some of these conditions were inferred from closely related disciplines such as organizational psychology, but others were grounded in software development projects. These de-escalation strategies and tactics help to either enhance de-escalation tendencies or reduce preexisting forces for commitment. A review of the de-escalation studies in the IS literature highlights a knowledge gap, which is conceptualising the transformation of actors' commitment during the transition from escalation to de-escalation of commitment. While Montealegre and Keil (2000) have offered a process perspective on how de-escalation can take place, very little information is unveiled regarding how actors overcome their previous failing courses of action either on their own or through the influence of other actors. Furthermore, the more important issue of gaining consensus among actors toward the alternative course of action remains unaddressed.

2.3 Adopting Lewin's Theory of Change

Lewin's (1951) theory of change can be used as a lens to conceptualise the inertias and enablers of the transformation of actors' commitment during the transition from escalation to de-escalation. Generally, the theory evolves around a basic change model of unfreezing, changing, and refreezing. The model perceives human change as a 'profound psychological dynamic process that involved painful unlearning without loss of ego identity, and difficult relearning as one cognitively attempted to restructure one's thoughts, perceptions, feelings, and attitudes' (Schein, 1996, p. 27). The model assumes that the change involves actors' attitudes and values, and the unlearning of the present set of behaviours is initially inherently painful. In addition, the model also suggests change as a multistage process and all stages must be negotiated before a stable change can be said to have taken place (Schein, 1988). So far, the model has been used widely in the Organizational Development area (Marshak, 1993), but more recently, also in IS research (Wastell et al., 2003).

The concept of deploying IT to bring about organizational transformation is not new in the IS area (Wastell et al., 2003), but examining the actors' commitment change in the transition from escalation to de-escalation is still exploratory. Figure 1 showing Lewin's stages and steps - a tentative framework for addressing our research questions and is also the framework we adopt for guiding our study. The framework suggests that unfreezing can only take place when there is motivation to change, and such motivation could either be self-induced or influenced by peers (Wastell et al., 2003). Unfreezing tends to generate a certain extent of psychological struggle within individuals, which can often be inherently painful. The change process involves the development of new attitudes based on new information and cognitive redefinition. Generally, learning takes place during the changing phase. Refreezing, it is believed, can only begin when new attitudes and behaviours are adopted. Finally, before relearning stabilizes, there must be successful alignment and integration with individuals' values and beliefs.

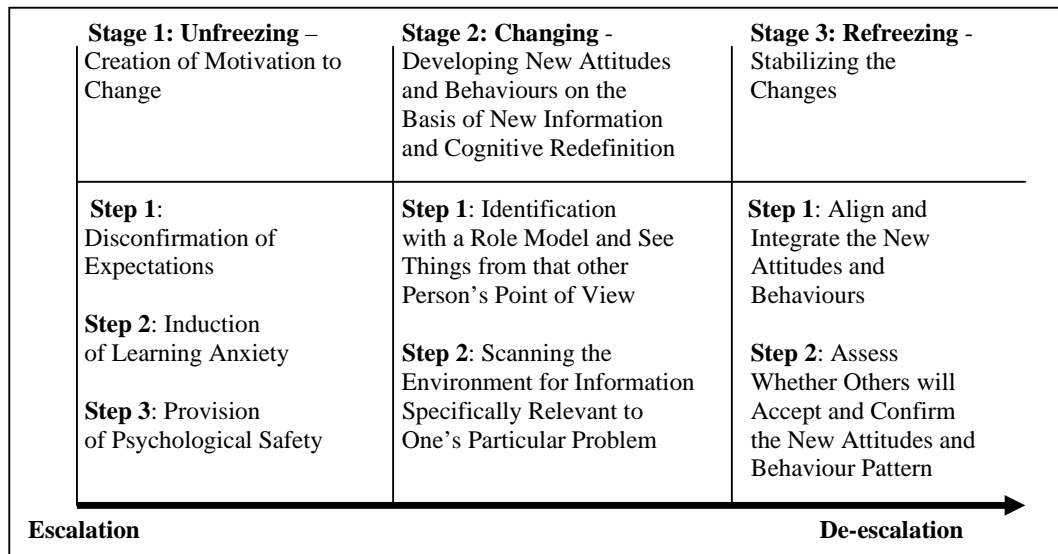


Figure 1. A Process Framework of Commitment Transformation during the Transition from Escalation to De-escalation

3 RESEARCH APPROACH

Our strategy was to undertake an in-depth case research (Klein & Myers, 1999) of an e-procurement project conducted in UKC. We did not consider laboratory experiments since the subjects may not have the same emotional attachments as managers personally involved in an IS development project (Brockner, 1992). The case study approach is particularly appropriate for our exploratory study since it allows us to better capture the organizational dynamics of the phenomenon (Newman and Sabherwal, 1996). Its strength also lies in its ability to explain the phenomenon based on the interpretation of data.

The research access was negotiated with the organisation in December 2001. From January 2002 to August 2002, we conducted our data collection. When we began our field research in January 2002, the organisation had just decided to continue and try to turnaround the failing project. It was in the midst of preparing its turnaround strategies. Therefore, we were able to clearly capture the dynamics of the de-escalation process necessary to answer our two research questions. Primarily, semi-structured interviews and informal discussions were conducted with all the relevant project stakeholders (Klein & Myers, 1999). These semi-structured interviews were taped-recorded with interviewees' permission and transcribed immediately after the meetings. Twenty-eight interviews were conducted, each lasting an average of one and a half hours involving altogether seventeen interviewees. Semi-structured interviews and observation were the main sources of our data because the researcher could grasp the interviewees' interpretations of their actions and events, as well as their beliefs and aspirations. Secondary data such as reports, memos and meeting minutes were also gathered to supplement the information collected through the interviews.

As a first step in our analysis, the first author used the interview transcripts to prepare a detailed case description containing a summary of the entire development process. Major events, key actors and the actions taken during the development process, were identified and summarized. The data were validated with several individuals who were familiar with the project's history. To reduce researcher bias, the project information was shown to the other authors who were uninvolved with data collection, to identify portions containing actors' commitment and actions taken that influence their participations in the de-escalation process. The entire data analysis process went through numerous

iterations to formulate a coherent and consistent overview of the case organization, with each iteration cycle, following the hermeneutic circle principle to case study development (Klein and Myers, 1999).

4 CASE STUDY: UKC

4.1 Background of the E-procurement Project and Why It Went Wrong

UKC is a UK municipal borough with an elected council that serves a local population of 221,000 residents and provides a large range of services. The idea of electronic government (e-government) originates from the central government's 1999 white paper, *Modernizing Government* which challenged all public sector organizations to achieve "citizen-centred services", by integrating policies and programs, "joining-up" delivery, harnessing the power of IT, and getting the best out of staff. The White Paper committed the government to the "use of new technology to meet the needs of citizens and business and not trail behind technology development". The overall champion for the e-government initiative was the cabinet deputy of the council, who was assigned a special post known as the "E-envoy". His main responsibility was to propel the e-government initiative within UKC. In 2000, there was a need to revamp the existing purchasing function in order to meet the target set within the e-government strategy plan that 100% of the goods purchased by the council had to be purchased electronically by 2005. Besides that, there were also other considerations for the UKC to implement the e-procurement system. These reasons included improving purchasing efficiency, setting up a cost control mechanism, and a strong desire to be the first local council in UK to purchase goods and services electronically. The council head gave full support for the project and the 12-month project was launched in January 2001 with an initial estimated cost of £150,000. The project was headed by the IS manager, who was supervised by an e-procurement committee formed by a group of senior managers within the council. An external software vendor, selected through a bidding system, helped to develop the software. Other key stakeholders include the internal users of the system such as the chief procurement officer, corporate service manager, corporate affairs manager, technical service manager and the e-business manager. External users would include goods and services suppliers.

The project faced several problems during its early stage of development. The main problem concerned conflicts among the IS project manager, the users and the IS contractor over design issues. On the one hand, internal users complained about the low quality of the software and the failure of the contractor to understand their requirements. On the other hand, the IS project manager and the IS contractor were dissatisfied with the indecisiveness of the users and pinpointed their frequent requests for design change as the main reason for delaying project development. The project initially stalled due to a disagreement between the users and the IS contractor. It all started when the IS contractor demanded an additional £150,000 for "*redesigning the software again*". Their reason was that since the contract price was 'fixed', any changes to the software after the users signed off the earlier versions of software prototypes were chargeable. However, the users disagreed with their claim because they viewed those changes as alterations resulting from the contractor's mistakes, rather than additions requested by them. Eventually, the e-procurement steering committee intervened and agreed to make the additional payment. As one of the committee members explained, "*What were we going to tell everybody if the project did not succeed? The stakes were very high and we could not disappoint them*".

After the committee's intervention, the project managed to continue for another two months before it finally collapsed. The same problems resurfaced and the users refused to continue participation in project development. Instead, they proposed the purchase of e-procurement packaged software. At the same time, the IS project manager seemed to lose control of the project and was busy haggling with the IS contractor over the issue of what requests were categorised as "additions" or "alterations". Despite this dire situation the e-procurement committee did not intervene directly, except for insisting

to the users that the project had to be continued. However, they did promise more resources. While the users were resolute about project abandonment, the IS project manager however, insisted that they should continue. He explained, *“How could we give up? With all the resources invested, the option of reverting back to buying packaged software was unimaginable”*. At that stage, the project had already exceeded £350 000 and was six months behind schedule.

4.2 The Transition from Escalation to De-escalation

Refusing to continue with the troubled project, one of the users decided to blow the whistle on the project by reporting to the E-envoy. She explained why she blew the whistle, *“I believed the involvement of the E-envoy would resolve the entanglement. The committee and the project manager were too optimistic and irrational, from my perspective”*. In December 2001, the E-envoy was informed and was surprised at the problems facing the project. He explained why the news came as a surprise to him, *“I had delegated the project manager and the e-procurement steering committee to lead the project. Besides, even at the bi-monthly management meetings over the past few months, the committee members did not inform me of any problem arising”*. Immediately, he delayed the development project indefinitely until a decision had been made. To resolve the problems, the E-envoy gathered all internal and external stakeholders including representatives from the IS contractor and the goods and services suppliers, to reconfirm his commitment to the project. He stated a strong desire for the project to be continued rather than abandoned and was very confident of a project turnaround. He commented, *“It was important for everyone to understand my standpoint, especially in that state of confusion. Besides, those problems could be easily resolved as long as everyone was committed to turn the troubled project around”*.

Once everyone had agreed to continue the troubled project, the E-envoy organized a focus group meeting with the e-procurement steering committee, the IS project manager, the user managers and the IS contractor to re-examine for the first time their previous problems. With the E-envoy's presence and participation, everyone showed great enthusiasm in the meeting. At the beginning of the meeting, the E-envoy delivered a speech to explain the significance of the meeting, *“I simply assured them that no individuals would be punished in this project. I also stressed that turning around the failing project was our utmost priority in order to salvage our reputation and the confidence the external constituencies had in us”*. The assurance from the E-envoy was well received by everyone present in that meeting as they began to discuss their differences openly. They were unafraid of highlighting their mistakes. In that meeting, several problems were identified. Sensing the e-envoy's determination to succeed, all relevant stakeholders arrived at a multilateral consensus to attempt to turn the project around. The IS project manager explained the change of attitude, *“Basically, he [the e-envoy] banged all our heads together. All he wanted was to try and get the cohesion of the team back. We promised him that we would get together and work out the differences”*. Despite the successful turnaround of the attitudes, the IS project manager did admit that it was a very difficult phase, *“We felt relieved that the e-envoy accepted our apologies for the earlier mess and it also took several of us quite a while to restore our confidence that a turnaround was indeed possible”*. Furthermore, it was also discovered later that any packaged software would need a large degree of customisation, which supposedly might take up to 6-9 months. The chief procurement officer admitted, *“It was unsuitable for the council as the customisation process would be too long for the project”*.

Having identified the problems, the whole team started to explore alternative courses of action. For the first time, with the participation of the E-envoy and the e-steering committee, the three groups (the user managers, the IS project manager and the IS contractor) started to cooperate and work towards a common goal. The team proposed the adoption of a partial abandonment strategy, which was to reduce the original scope of the project without causing significant changes to its original specification. For that reason, three user departments were short listed as the pilot sites, hence allowing the IS project manager to deal with the needs of only three user departments rather than eight departments formerly. Furthermore, the project had been separated in three stages. Instead of implementing full scale

procurement functions all at one go, the first stage would now focus on the ‘front purchasing process’ which included only ordering, issuing of purchase orders and delivery of items. The e-envoy concluded, “*By reducing the scope, certainly enhanced our chances of success*”. Sensing the E-envoy’s determination to succeed, all relevant parties arrived at a multilateral consensus to draw up a list of turnaround tactics. The list is summarised in table 1.

Problems identified in the earlier development process	Remedies planned as part of the turnaround strategies
Ambitious project scope - implementation across eight user departments	Reducing the project scope – implementation across only three user departments
Ineffective project strategy – ‘big bang’ approach	Adopting an alternative project strategy – incremental approach
Involvement of too many stakeholder representatives	Reducing the number of stakeholder representatives in a stakeholder group
Low product quality and poor service performed by the IS contractor	Requesting to deal with a new team which included a senior project manager from the IS contractor
The irrational composition of user representatives in the project group	Involving users who were handling purchasing transactions on a day-to-day basis
No direct communication between the users and the IS contractor	Allowing direct communications between the users and the IS contractor
Varying level of stakeholder commitment	Obtaining fully committed users by excluding non-committed user departments from the pilot tests
Little involvement in the development process by the e-envoy and the e-procurement steering committee	Close monitoring from the e-envoy and the e-procurement steering committee. Weekly progress meetings were planned
Inflexible ‘fixed price contract’	Restructuring of the original contract
No changes should be allowed after signing off the prototype	Strictly enforcing the ‘no change’ rule after a prototype was signed off

Table 1. A list of Problems Identified in the Earlier Development Process and Remedies Planned as Part of the Turnaround Strategies

In February 2002, the E-envoy ordered a stakeholder analysis before carrying out the action plans. The purpose was to find out whether all internal and external constituencies fully supported the devised turnaround strategies. The E-envoy reckoned that a new stakeholder analysis must be performed since actors involved in the development process could still be strongly committed to the prior failing course of action. The e-procurement steering committee members carried out the stakeholder analysis. For those who still had some doubts, the e-envoy and the committee members spent considerable effort to convince them. One of the committee members explained what they did, “*we simply made sure that everyone felt comfortable with the exit strategy. We also encouraged project members to discuss among themselves to see if the exit strategy was the best available option*”. All the changes were implemented immediately and they produced remarkable results. One of the user manager commented, “*With fewer users, things seemed to progress smoothly and quickly. I would think that everyone of us was determined to make this work. Even the contractor came to meetings two or three times a week. The new team seemed to show more enthusiasm and commitment. In addition, the committee’s close monitoring kept all of us on our toes*”. When the first phase of the e-procurement system finally went ‘live’ in August 2002, the project was eight months behind schedule and close to £500,000 over its original budget. The relatively smooth implementation after the adoption of the de-escalation strategy meant that the crisis concerning the project was finally over.

5 DISCUSSIONS

Given that people have a tendency to remain committed to previously accepted beliefs and preferences, it is possible for various constituencies to try to prevent an organization from carrying out de-escalation of commitment (Drummond, 1995). Therefore, this paper argues that understanding the process of how actors overcome their commitment to a previous failing course of action and subsequently, jointly agreed to an exit strategy becomes important in facilitating a de-escalation strategy. Our finding concurs with previous research that the de-escalation process is a complex and gradual process (Montealegre and Keil, 2000), and actors played key roles in facilitating the de-escalation strategy (Heng et al., 2003). By applying the steps provided by the process framework shown in figure 1, we analyze in the following section how actors surrender their commitment to a previous failing course of action and accept a jointly agreed exit strategy.

5.1 Lesson 1: Failing Course of Action was Disconfirmed – Unfreezing Stage

Lewin (1958) suggests that change is only possible when present behaviour must fail to be confirmed over a period of time. In other words, it could be when a group discovers its behaviour does not lead to expected outcomes or may even lead to undesirable outcomes. However, often in projects, a strongly held conviction and the refusal to let inevitable setbacks undermine it are just reasons why bad projects are so hard to kill (Royer, 2003). Furthermore, it may also be difficult to obtain accurate information about project status or the principals may be “economical” with the truth (Keil and Robey, 2001).

In the case of UKC, the disconfirmation arose when the users refused to continue participation in the development process. The project had failed to proceed beyond prototyping and the users were disillusioned about its prospect and therefore, initiated the change. By informing the e-envoy regarding the status of the troubled project, the users relieved themselves from the perceived disadvantage of the micro-politics of being in a minority, which was ‘the rest against one’ (Drummond, 1995). The perceived power of the e-envoy had set up sufficient guilt or anxiety to motivate a change among the actors (Schein, 1996). If the users had not involved the e-envoy, the discomfort would be at a low level, which would be dealt with by denial or by avoidance of the disconfirming source. A good example of avoidance is ‘when the e-procurement committee did not intervene at all, except for insisting the users that the project had to be continued’. Therefore, e-envoy’s intervention clearly imposed pressure on the rest of the project members and the committee members, which made them realize that they had failed to live up to his expectations. The discomfort in terms of guilt and anxiety would motivate the actors to turn the troubled project around since they would probably be eager to prove that the earlier mistakes were attributed to external reasons and not poor individual ability (Gundlach et al., 2003).

5.2 Lesson 2: Psychological Safety was provided for Project Members– Unfreezing Stage

The creation of psychological safety, either by removing barriers to change or by eliminating the threat inherent in the past failures can motivate change (Schein, 1988). Weick and Quinn (1999) suggest that a change agent plays a crucial role in making people feel secure and capable of changing without reducing the validity of the disconfirming information. This is important because people are willing to give up the present course of action and to enter the uncertainty of learning something new, only if they feel secure. Correspondingly, in an IS project environment, it is vital for managers to reduce the severity of penalties for failure to avoid escalation of commitment (Newman and Sabherwal, 1996; Keil, 1995). As Heng et al., (2003) clearly point out in their experiment, providing assurance proved useful in facilitating de-escalation of commitment.

In the UKC case, the e-envoy adopted a proactive collective approach of resolving the crisis. His main emphasis was on restoring the cohesiveness of the team. His assurance that no individuals would be punished for earlier problems came as a significant relief for the project members as they openly discussed their individual shortcomings that had occurred in the earlier development process. It was through such open communication that the whole team started to click and work toward a common goal of project turnaround. However, it must be pointed out that it was difficult for project members to balance painful disconfirming messages with reassurance that change was possible, as our interview data suggested, 'it also took several of us quite a while to restore our confidence that a turnaround was indeed possible'. Clearly, this resembles Montealegre and Keil's (2000) description of a gradual consensus building process.

5.3 Lesson 3: Project Members Developed New Attitudes and Behaviours– Changing Stage

Schein's (1996) work suggests that change occurs through cognitive restructuring in which words are redefined to mean something other than previously assumed, concepts are interpreted more extensively, or new standards of judgment and evaluation are learned. When unfreezing occurs and people are motivated to learn something, they tend to be especially attentive to ideas that are in circulation, a mechanism called translation (Weick and Quinn, 1999). In many situations, people develop new attitudes by identifying with a role model or scanning the environment for information relevant to the change (Schein, 1988). This explains why changes in top management or project championship is important to trigger de-escalation since it allows a fresh appraisal of the project as project members tend to identify with their leader (Ross and Staw, 1993).

In the case of UKC, the e-envoy became the target of identification, as his stance became the new attitudes or behaviours to be learned by the project members. For instance, the e-envoy simply decided that the project had to be continued rather than abandoned and insisted that 'it was important for everyone to understand my standpoint'. Furthermore, there were several examples in the case, which also illustrated how the e-envoy influenced the project group's attitudes and behaviours. These examples are 'with the E-envoy's presence and participation, everyone showed great enthusiasm in the meeting' and 'sensing the E-envoy's determination to succeed, all relevant parties arrived at a multilateral consensus'. Besides identification, people may also collect other sources of information to develop new attitudes. For instance, the users abandoned the idea of replacing the software development with packaged software because they learnt that any packaged software would need a large degree of customization, which supposedly might take up to 6-9 months and was deemed unsuitable for the council. Scanning for information from the environment is common in projects, for example when consultants were employed to review troubled projects in the Taurus project (Drummond, 1996) and the Denver International Airport project (Montealegre and Keil, 2000).

5.4 Lesson 4: Project Members Aligned and Integrated the New Attitudes and Behaviours – Refreezing Stage

Weick and Quinn (1999) suggest that the most difficult stage in a change process is behaviour alterations. In the action stage, Schein (1988) suggests that induced attitudinal changes usually do not last because the new things learnt either do not fit into the person's total personality or are incongruent with his tolerance level. Beer et al (1990) point out that it is common for most people who reach the action stage to relapse and change back to a previous course of action. Even in project settings, integrating new attitudes and behaviours seem challenging simply because belief is a powerful sentiment and sometimes this 'faith' can be so hard to kill (Royer, 2003). In IT project environments, Montealegre and Keil (2000) found that the collective belief among project members was so widespread that the project had been institutionalized. Therefore, where alignment and integration of new attitudes and behaviour are concerned, special efforts are necessary to deinstitutionalize the project.

In the case of UKC, the e-procurement committee conducted a stakeholder analysis before carrying out the action plans, to find out whether all internal and external constituencies fully supported the devised turnaround strategies. It was necessary to ensure that new attitudes and behaviours had been aligned and integrated before any change could be stabilized. As for those who still had some doubts, influence tactics were deployed to ensure that the newly adopted attitudes were congruent with individuals' beliefs. During this period, negotiations were also carried out for consensus building (Montealegre and Keil, 2000). Furthermore, the e-envoy also encouraged the project group to reinforce the new behaviours in each other. This guaranteed the behaviour patterns learnt and reinforced collectively that ultimately become part of individuals' behaviour repertoire (Royer, 2003). Figure 2 represents the commitment transformation process during the transition from escalation to de-escalation at UKC.

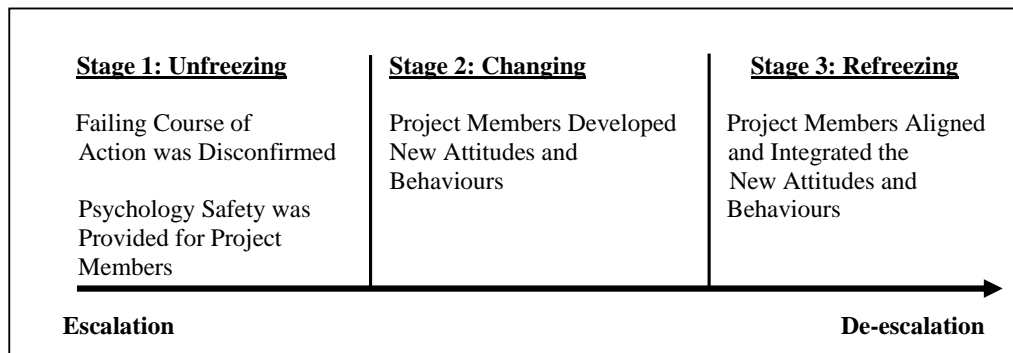


Figure 2. Commitment Transformation during the Transition from Escalation to De-escalation at UKC

6 IMPLICATIONS AND CONCLUSIONS

In this paper, we have argued that unfreezing of commitment to a failing course of action is critical if de-escalation is to be effected. It is clear that the entire process of 'unfreezing-changing-refreezing' has occurred in the case of UKC, and enacted through the deployment of behaviour disconfirmation, psychological safety creation, cognitive redefinition and finally, new attitude and behaviour alignment and integration. The process framework developed here has important implications for both research and practice. For researchers, this paper makes a contribution by providing a process framework to examine commitment transformation during the transition from escalation to de-escalation. Though previous studies have identified several triggering activities that promote de-escalation, little is known about commitment transformation during the transition from escalation to de-escalation, for which our framework can serve as the basis for further de-escalation research. For practitioners, this study provides managers with useful insights on how to gain project members' commitment to alternative course of action. In addition, the UKC case underscores the need for managers to be aware of barriers threatening the transformation of commitment. Perhaps, strategies and tactics can be deployed to ensure that the commitment transformation process is smoothly facilitated. There are two major limitations in this paper. First, the use of 'change management' metaphors in this paper may have implied that change is seen as necessarily desirable and inevitable, but in fact it is contingent and contested. Second, the Lewin's metaphor may be outdated and too mechanistic (Beer and Nohria, 2000) for today's fast-changing and complex organizations. Despite the limitations, we are convinced that this study is still very useful since project escalation is a common and costly problem among IS development projects (Keil, 1995), and there can be no question about the importance of a deeper understanding of its nature and avoidance (Newman and Sabherwal, 1996). Finally, while this study

represents an important step toward understanding de-escalation, longitudinal field studies that involve multiple case studies are clearly called for, to reflect the diversity of commitment change dynamics.

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