Non-Traditional Research

More Than a Cognitive Experience: Unfamiliarity, Invalidation, and Emotion in Organizational Learning

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Abstract

Literature on organizational learning (OL) lacks an integrative framework that captures the emotions involved as OL proceeds. Drawing on personal construct theory, we suggest that organizations learn where their members reconstrue meaning around questions of strategic significance for the organization. In this 5-year study of an electronics company, we explore the way in which emotions change as members perceive progress or a lack of progress around strategic themes. Our framework also takes into account whether OL involves experiences that are familiar or unfamiliar and the implications for emotions. We detected similar patterns of emotion arising over time for three different themes in our data, thereby adding to OL perspectives that are predominantly cognitive in orientation.

Introduction

Our aim in this article is to investigate the relationship between emotion and organizational learning (OL). To do this, we draw on construct theory (Kelly, 1955) as others have done (e.g., Reger, Gustafson, Demarie, & Mullane, 1994; Simpson & Marshall, 2010) and apply it at the organizational level. It has been argued that "Kelly's constructive alternativism . . . resonates strongly with pragmatist ideas about the ever-changing-ness of everyday knowledge and the experimental nature of inquiry" (Simpson & Marshall, 2010, p. 255). Construct theory helps us to understand the role of emotion in OL, viewing emotion as awareness of change in how events are construed, arising from invalidation (Kelly, 1955). Following construct theory, we argue that organizations learn where their members reconstrue meaning around questions of strategic significance for the organization. Connecting with Friedman's (2001) and Simon's (1991) definition of OL as done *by* individuals *about* organizational problems, we argue that because OL is reflexive and includes awareness of change, emotion is involved.

Our research questions are first to investigate the emotions that arise as members reconstrue meaning around questions of strategic significance (in line with our definition of OL) and second to explore the extent to which OL involves a sequence of emotions as members reflect over time on these strategic questions. Our conceptual framing—construct theory (Kelly, 1955)—leads us to take account of whether OL

experiences represent validation, thereby corresponding with members' expectations, or invalidation, prompting a reassessment of preexisting ways of thinking and behaving. We also, again drawing on Kelly (1955), explore the emotional implications of familiar versus unfamiliar experience. According to our emergent framework, both invalidation and unfamiliarity raise emotions that in turn shape OL as it unfolds over time.

OL: More Than a Cognitive Experience?

Two contrasting approaches have been articulated in the OL literature (Shipton, 2006). The first posits that various stages are involved as knowledge is moved through the organization, starting with the individual to the work group, culminating in an application phase where the requisite changes in organizational functioning occur in a feed-forward process or in the reverse direction through feedback (Crossan, Lane, & White, 1999). The second suggests instead that learning arises naturally from the work environment following day-to-day

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work activity (J. Brown & Duguid, 1991, 2001). In the first category, over the last decade or so, there has been significant progress in our understanding of the constituent elements or design parameters of OL (Argote & Miron-Spektor, 2011; Thomas, Sussman, & Henderson, 2001) and the stages involved such that individual cognitions are shared, captured, and enacted at the level of the organization (Berends & Lammers, 2010; Crossan et al., 1999). In the second category, scholars writing from situated learning perspectives (Lave & Wenger, 1991) also focus on cognitive exchange. Tsoukas (2009), for example, outlined three processes associated with dialogue: conceptual combination, expansion, and reframing, whereas Patriotta (2003) made reference to parallel stages released through narrative: knowledge creation, utilization, and institutionalization. Taken together, these approaches offer valuable insights into how OL *as a process of knowledge exchange* may evolve in situ, might be measured and its cross-level nature, but offer limited scope for teasing out the emotions involved. There have been several calls to devote more research attention to this area (Argote & Miron-Spektor, 2011; Crossan, Maurer, & White, 2011; Fineman, 2003).

Elsewhere, there is growing interest in emotions, especially in literatures on creativity (e.g., Fong, 2006; George & Zhou, 2007), discovery (Jermier & Domagalski, 2000; Mohrman, 2010), problem solving (Coget & Keller, 2010), and change (Huy, 1999, 2002, 2005, 2009). There are also valuable insights where OL is seen as "the insights and successful restructuring of organizational problems by individuals" (Friedman, 2001, p. 398), rather than a process of knowledge exchange. Argyris (1990), for example, has drawn attention to the defensive thought patterns and resulting anxiety that can inhibit open and honest reflection. Others (e.g., Fineman, 2003; Griffiths, Winstanley, & Gabriel, 2005; R. Vince & Saleem, 2004) have highlighted how repeated patterns of caution and blame may lead to a shared disquiet that impedes reflection and communication. Psychodynamic theory holds that the emotions generated through OL either constrain or elicit change through reinforcing or inhibiting desired actions (Antonacopoulou & Gabriel, 2001; R. B. Brown, 2000). Other perspectives on OL have revealed that unexpected occurrences may evoke cognitive shock, and corresponding negative emotions, thereby exposing weaknesses and revealing unrealized behavioral potential (Christianson, Farkas, Sutcliffe, & Weick, 2009). Griffiths et al. (2005) have also alluded to "learning shock," which they define as a traumatic experience involving acute frustration, confusion, and anxiety. There are also "political" emotions such as resentful challenge by subordinates and angry defensiveness by superiors (R. Vince, 2001) that become entrenched and provide legitimacy for particular emotions. Anxieties experienced by subordinates require careful treatment by superiors (Schein, 1993).

Despite the insights that these perspectives offer, few studies have explicitly considered the emotions involved as individuals reflect on their organization's attempts to learn and any potential sequencing of emotions as OL proceeds. This is where our work makes a contribution.

Construct Theory and Emotion

Construct theory contends that emotions are the awareness of imminent, necessary, or possible transitions in our construct systems: "Being in a state of awareness of some fate of the construct system is the essential aspect which distinguishes some behaviour as emotional from other behaviour which is unemotional" (McCoy, 1977, p. 99). Anxiety, guilt, and threat are what people feel when they realize that our construct systems need to change (Butt, 2008). Reger et al. (1994) used construct theory to explain emotions such as anger, indifference, and anxiety during organizational change, and Simpson and Marshall (2010) showed that hostility and love were involved when new ideas were brought into a group. Learning occurs as the viewer redefines the construct system and starts asking different questions. Adjusting a construct system to a point where new and different constructs can be incorporated is an essential part of creating meaning while at the same time a major challenge (Butt, 2008).

We believe that an integrating theory would explain OL as a collectively experienced emotional journey, because scholars view emotions as sequences that unfold chronologically (e.g., Elfenbein, 2007) and because individual learning in organizations manifests sequences of emotions (Simpson & Marshall, 2010). The notion of succession of emotions is implicit in construct theory (McCoy, 1977). Sequences of emotions are also part of individuals' repertoire of coping strategies. For example, Kubler-Ross (1969) showed that reaction to loss occurs through a sequence of different emotions. Some have even argued that emotions are not discrete but exist as sequences or transitions of affective states (Ortony & Turner, 1990) or as a process in which a sequence of multiple emotional signals are compared and evaluated (Scherer, 2001).

According to construct theory, emotion is experienced along dimensions of construing first about invalidation of the self and second about familiarity of the situation (Kelly, 1955, 1963; McCoy, 1977). In terms of the first dimension, validation versus invalidation of self (organizational self in the case of OL), invalidation requires changed construing that engenders unpleasant, negative emotions, whereas validation requires changed construing that engenders pleasant, positive emotions. The second dimension suggests that unfamiliar events are more difficult to anticipate and so are associated with high emotional arousal, and familiar events are easier to anticipate and so are associated with low emotional arousal.

These ideas suggest notions of validation (feeling in control) as well as invalidation (capturing a sense that change is

required and that existing ways of working are no longer appropriate) are relevant to OL and also imply that the question of closeness to or distance from experience may be significant. Through OL, members might face unexpected and unfamiliar challenges evocative of anxiety and/or excitement (Huy, 2008), or alternatively, where failure or less than expected outcomes are perceived, despondency, anguish, or even despair (Schein, 1996). Emotions arising from OL that involve unfamiliar experiences are likely to give rise to heightened, rather than comfortable, emotions (Kang, Morris, & Snell, 2007).

Measuring OL is potentially problematic (Argote & Miron-Spektor, 2011). Friedman's (2001) and Simon's (1991) definition of OL as done *by* individuals *about* organizational problems supported our use of a theory of individual constructs (Kelly, 1955) about organizational themes (Kalekin-Fishman & Walker, 1996). We also turned to literature suggesting that shared meanings coalesce through social interaction, meanings that, rather than being imposed from above, are emergent across hierarchies, from the bottom up (Berthoin Antal & Richebé, 2009; Elkjaer, 2004; Kalekin-Fishman & Walker, 1996; Kelly, 1955; Weick & Roberts, 1996). To operationalize our conceptual framing, we were guided by Morgeson and Hofmann (1999), who have argued that "Inferences at the collective level will be facilitated by focusing on collective phenomena, framing questions in collective terms, treating individuals as informants about collective processes, and focusing on the role of individuals in terms of the wider collective"(p. 261). Insights from these various literatures meant that we framed our questions in *collective* rather than individual terms.

Our research approach was inductive rather than deductive in this study. We started by exploring the relationship between individual learning and OL and the mechanisms or processes in place to enable knowledge exchange, in line with the mainstream OL literature. Over time, insights suggestive of emotion led us to connect with construct theory and brought to the fore questions around unfamiliarity and invalidation in OL. Finally, we sought to identify the emotions involved at key stages in the process.

Method

The site of our research was Electroco Newtown, a company manufacturing electronic equipment, including photocopiers and photocopier toner, for the office environment. Head count stood at 682 at the time the research commenced (2003) and had increased to 830 by the time the project finished (July 2008). For the duration of the study, the company had a turnover of between 80 and 85 million pounds and profits of between 7 and 15 million pounds per annum. Electroco Newtown was a U.K. subsidiary of a multinational, Electroco Japan, which was a leading global manufacturer for electronic and related equipment. Electroco

Newtown was regarded as a major employer in the local area, especially because it adhered to a "no redundancy" policy. As a subsidiary of Japan, Electroco Newtown had seen considerable and steady expansion over the past 15 years. However, there were signs throughout the period of our research of imminent change in Japan Electroco's worldwide strategy. Much of Japan Electroco's manufacturing was becoming concentrated in the far East. Senior managers reported to us that support was gradually being withdrawn from Electroco UK, which was expected to become increasingly independent of the parent company. This placed Electroco Newtown's future existence in doubt and raised a number of tensions.

The research involved engaging with the company in-depth to create a rich and nuanced picture of developments within the company over an extended time frame (5 years). We visited the organization 23 times in 2003/2004, 5 times in 2005/2006, and 21 times in 2007/2008. On occasions during these visits, we recorded informal conversations and observations—for example, when we met people over lunch or while observing the company. We wrote up more than 6,000 words of field notes capturing these data. We were also provided with company documents about annual attitude surveys and in-house management training programs, and were invited to attend company briefings to the workforce, one of which (in 2005/2006) involved the whole company in a day-off site discussing the future strategic remit of Electroco Newtown. There were three phases of data collection, interspersed with focus group meetings with senior management and various reports back to the organization. For all phases, we drew on grounded theory research methodology (Glaser & Strauss, 1967), to elicit feedback from the organization, which was then used to inform our reading of the theoretical literature and our future research plans and/or refine emerging ideas.

Data Collection

The study commenced in 2003/2004. We asked senior management to select interviewees to include a sample of individuals from across the company. A total of 24 interviewees were invited to participate in the study, encompassing senior and middle managers and assistant managers, team leaders, purchasing professionals, engineers, and IT specialists as well as operatives on the assembly line, quality control personnel, and office staff (see Table 1).

The study was initially intended to be cross-sectional, with the intention of gaining a detailed understanding of the barriers and enablers of OL as perceived by the respondents. Having completed the first wave of data collection, we kept in touch with the company and, observing that a change in the strategic direction was envisaged, requested further data access. After discussion, it was decided that we should conduct two further rounds of data collection.

Table 1. Distribution of Sample Across Three Time Phases.

Job title	Respondent number	Time 1	Time 2	Time 3
Senior manager (managing director)	1	X	X	X
Senior manager (production director)	2	X	X	
Senior manager (financial director)	3	X	X	X
Senior manager (marketing director)[a]	4			X
Middle manager (maintenance)	5	X	X	X
Middle manager (environmental)	6			X
Middle manager (continuous improvement)	7	X	X	X
Middle manager (assembly)	8		X	X
Assistant manager (assembly)	9	X	X	
Assistant manager (continuous improvement)	10	X		X
Assistant manager (environmental)	11	X	X	X
Team leader (assembly)	12	X	X	X
Team leader (toner)	13	X		X
Team leader (assembly)	14			X
Purchasing officer	15	X		X
Purchasing officer	16	X	X	X
Engineer (Assembly Line 1)	17	X	X	X
Engineer (Assembly Line 2)	18	X	X	X
Engineer (toner)	19	X	X	X
Engineer (environmental)	20			X
Operative (assembly)	21	X		X
Operative (assembly)	22	X		X
Operative (assembly)	23	X	X	X
Operative (toner)	24	X	X	X
Operative (toner)	25		X	X
Training manager (continuous improvement)	26	X	X	X
Training advisor (induction and development)	27			X
HR manager	28	X	X	
HR officer	29	X	X	X
Administrator (financial)	30	X	X	X
Administrator (marketing)[a]	31			X
Senior programmer	32		X	X
IT advisor	33		X	X
Business planning manager	34		X	X
Business planning (marketing)[a]	35			X
Business planning (technical)[a]	36			X
Business planning administrator[a]	37			X
Total respondents		24	22	34

[a]These posts did not exist prior to the data collection in 2007.

Learning unfolds over time, and for this reason, we decided on a research strategy that would allow us to track developments (Easterby-Smith, Burgoyne, & Araujo, 1999). By adopting a longitudinal perspective over 5 years, we could explore the perceptions our respondents had of organizational-level learning and change, and the way in which these perceptions changed. We drew on documentary evidence and took notes of informal conversations and company tours. We directed our respondents to think of particular learning episodes they had recently been involved in. Thus, we treated contextually specific learning themes as discrete analytic foci, as have others (e.g., Knight & Pye, 2005; Maitlis & Lawrence, 2007). We used interviews and focus groups to assess whether there was evidence of a willingness to share insights related to the key themes, to provide the opportunity for participants to respond to the insights of others within the group. Analyses were fed back into the company through ongoing dialogue between researchers and the

organization, with a 7,000 word report and various management briefing documents, together with face-to-face presentations between researchers and senior managers.

At the second point in time (2005/2006), we interviewed 22 employees. As far as possible, we drew on respondents from the first phase, to explore the extent of change in perceptions around the strategic themes that were starting to emerge. At the third point in time (2007/2008), we conducted a further 34 interviews. We aimed as much as possible to get a similar wide range of positions and functions. In addition, we asked that, where possible, we should speak to the same people again (3 were unavailable for various reasons; see Table 1). At all time phases, we emphasized our independent status, not part of senior management and not employed by the organization for this project, and also assured people that the conversation was confidential, stating that although interviews would be recorded to ensure accurate retention of the data, it would not be possible for individuals to be identified in any ensuing reports or academic papers. Most interviews lasted for approximately 1 hr; some were considerably longer than this, especially but not exclusively for those at more senior levels. After each interview, we conducted short debriefing sessions and noted emerging patterns. We triangulated the data in various ways: by comparing interview data with informal conversations that we wrote up as field notes; through studying archival material such as employee attitude surveys, details of policy and practice especially around the area of learning and training, company benchmarking activities, employee briefing sessions, and minutes of management meetings; and by relating together interview, focus group, and field note data. The longitudinal nature of the study and many opportunities for gathering data, as well as multiple sources, and frequent feedback and discussion with the company throughout the process allowed the authors to make full use of the variety and complexity of the data.

Data Analysis

It was important for respondents not to feel inhibited. We therefore carried out individual interviews, following suggestions about using individuals as informants about organizational attributes (Earley, 1993; Lindsley, Brass, & Thomas, 1995). We recorded and transcribed all the interview scripts and articulated our emergent theoretical understanding (Glaser & Strauss, 1967). To begin with, both authors read through all the transcripts, making notes of emerging themes and sharing insights. We found many examples of personal development that revealed a lot about individual emotions and potential barriers, and enablers for learning but less about the emotions arising from contemplation of organizational-level factors. Guided by the notion that OL is done *by* individuals *about* organizational problems (Friedman, 2001), we decided to focus on strategic themes and members' reflections in relation to those themes. This decision helped to hone our data. As the

process unfolded, we chose our theoretical framing (construct theory) and agreed to take into account members' experience of (in)validation and (un)familiarity in relation to each theme. This theoretical framework was beneficial as it further focused us toward a narrower scrutiny of the data. We then followed a two-stage fine-coding scheme in which codes were derived inductively from interviews and agreed on by the authors. Coding is an established method of description, conceptual ordering, and theorization (Strauss & Corbin, 1998) whereby researchers extract the most relevant themes from the data, arrange them in a hierarchy, and note them, to further document their precise meaning.

There were two separate stages in the analysis. For the first stage, we acknowledged as significantly problematic issue of whether organizations can mimic individuals and "learn" (Morgeson & Hofmann, 1999). We consequently ensured our three themes (independence from Japan, approach to learning, becoming a solutions provider) were collective constructs. We did this by investigating the processes through which the collective constructs (our three strategic learning themes) emerged (Morgeson & Hofmann, 1999). This involved examining member reflections on each of our three strategic learning themes (see Figure 1) to detect underlying constructs and second-order themes (Maitlis & Lawrence, 2007).

Insights from our respondents suggested a trajectory that was subtly different for each theme. Achieving independence from Japan involved both a shared "destroying" phase where the relationship with Japan was collectively criticized and a "realizing" phase as people at Newtown started to share together their appreciation of the potential it had as a collective entity that was separate from the parent company. For the theme "approach to learning," we considered this to be about learning that was shared such as about strategic initiatives and new products; it became apparent that respondents were increasingly looking externally at exemplar companies elsewhere, for example, and self-improving over the three time phases. For the theme "becoming a solutions provider," concepts (raised by our respondents) such as "discussion of success stories" and "emphasis on moving into previously unknown areas" led us to believe that "exploring" was a key determinant of progress in this area and involved a collective process that individuals shared.

We evaluated our three collective constructs by using two criteria to ensure that the constructs that were emerging in our individual interview data were collective (Morgeson & Hofmann, 1999). One criterion was relevance to strategic themes of importance to the organization, as when OL is defined as a form of strategic renewal (Corley, Gioia, & Fabbri, 2009; Crossan et al., 1999) or when members reconstrue their experiences that have strategic significance for their organization. An example is a statement made to us in 2005/2006 by the managing director: "Don't even think of closing down. I would put it as a nonagenda item." Here it is
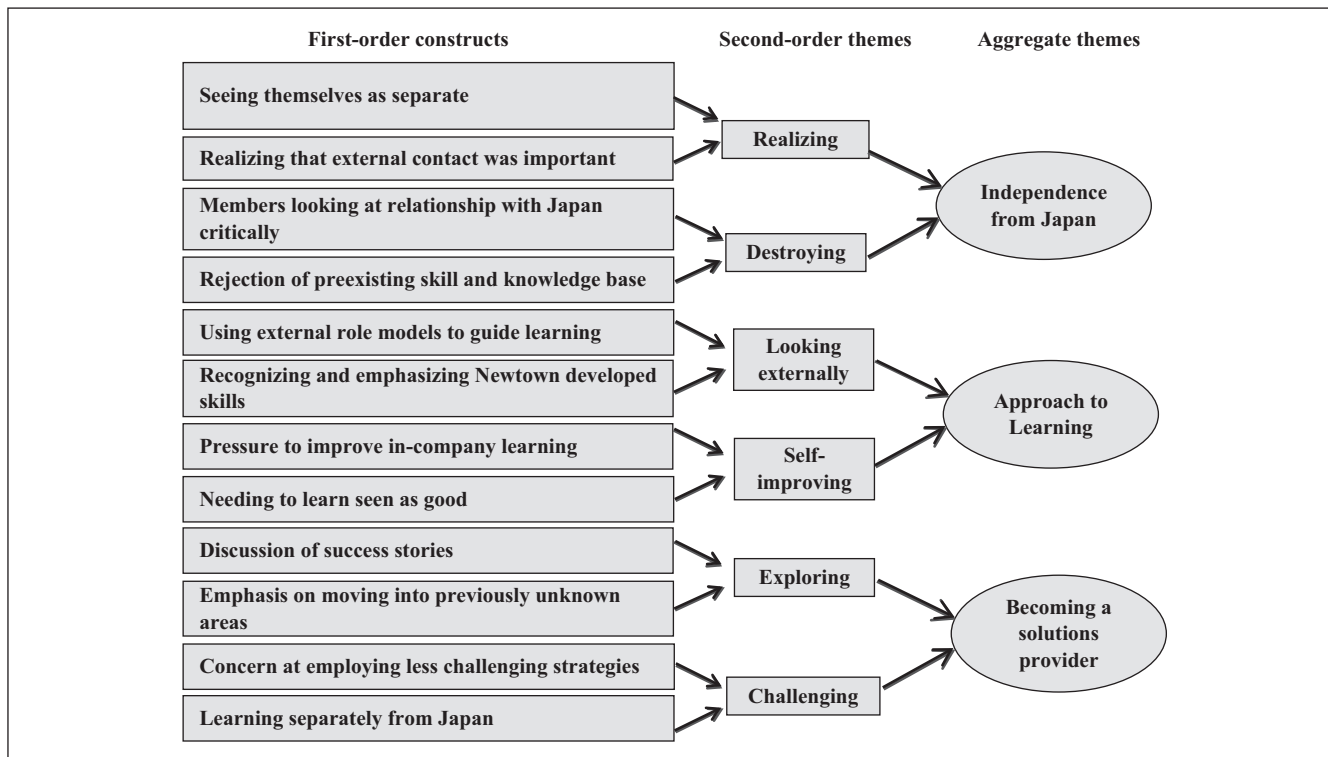
Figure 1. Data Structure 1: The learning process for the three strategic learning themes.

the role of the construct (survival of the company) that indicates the strategic nature of the issue and that gives the construct organizational relevance and thus makes it a collective construct (Morgeson & Hofmann, 1999).

The other criterion of being a collective construct was suggested by theories of shared experience through social interaction (Weick & Roberts, 1996) that have meanings emerge from the bottom up, often not consciously negotiated (e.g., Elkjaer, 2004). An example from a senior engineer in our 2003/2004 data is as follows: "We [at Newtown] find it difficult to get Electroco [Japan] to take our ideas seriously." Here the speaker claims a shared experience of frustration, which we define as the feeling of being upset or annoyed as a result of being unable to change or achieve something. In addition, the speaker expresses a bottom–up emergent understanding of Newtown's difficult subsidiary relationship with its Japanese parent. In the second phase, informed by construct theory (Kelly, 1955), we were interested in the role of validation versus invalidation, at the same time taking into account whether experiences were judged to be close to or far from prior experience.

Findings

Our research questions were to denote more precisely the emotions arising from OL and, using construct theory as our conceptual map, to examine the role of familiarity and invalidation in OL, and how emotions changed as OL progressed. We therefore examined whether the experiences that people described to us signified validation, whereby the experiences corresponded with expectations, or invalidation, prompting reassessment of the construct system that had evolved previously. We also set out to explore perceptions of closeness to or distance from experience for emotional implications.

Overall, our analysis revealed that there were changes in meaning construal across the three time phases and that a predominant way of construing could be detected for the three themes at each point in time. Looking across the themes, the pattern over time was suggestive of change from the invalidation of familiar experiences toward the validation of unfamiliar experiences. Along the journey, people described uncomfortable experiences that were far away from those to which they were accustomed (i.e., both invalidated and unfamiliar), as well as experiences that seemed to be both validating and unfamiliar (suggestive of excitement, which we define as a feeling of great enthusiasm and eagerness). The experiences that people reported to us imply that thought was infused with emotions such as this engineer's proud claim: "We have been developing our own spray machine . . . potentially it's a major step forward

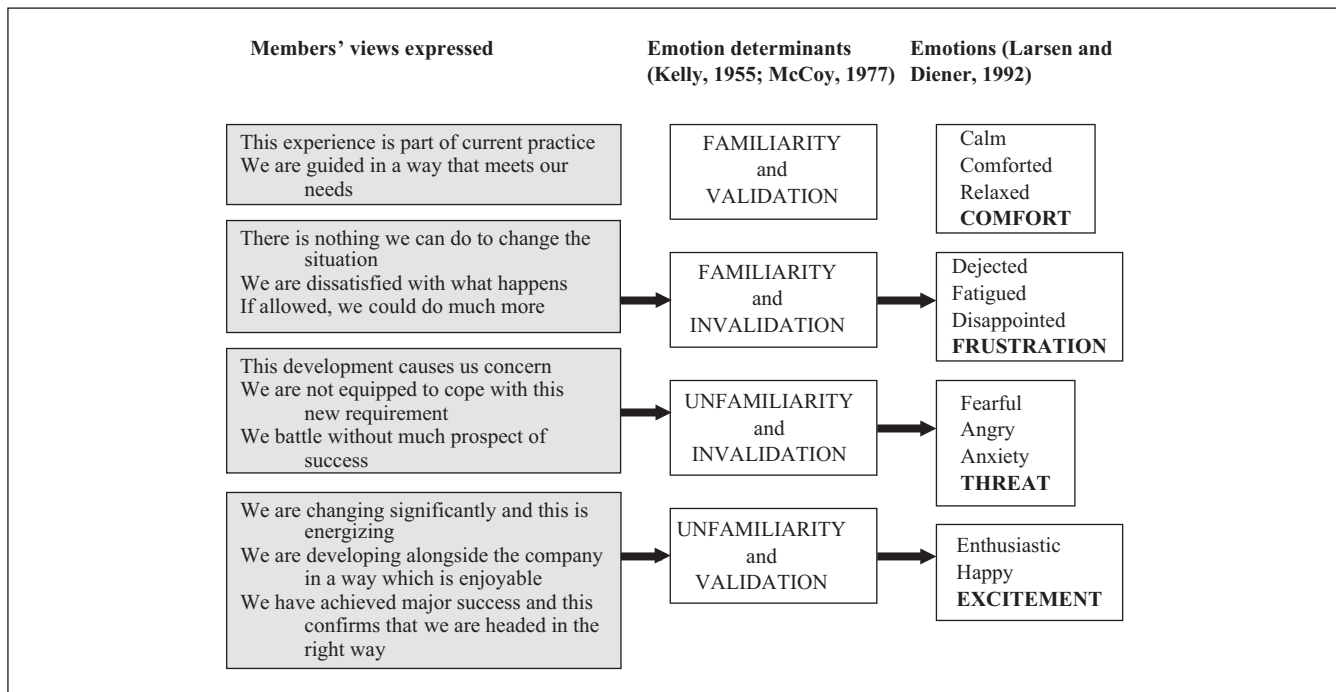| Members' views expressed	Emotion determinants (Kelly, 1955; McCoy, 1977)	Emotions (Larsen and Diener, 1992)
This experience is part of current practice We are guided in a way that meets our needs	FAMILIARITY and VALIDATION	Calm Comforted Relaxed **COMFORT**
There is nothing we can do to change the situation We are dissatisfied with what happens If allowed, we could do much more	FAMILIARITY and INVALIDATION	Dejected Fatigued Disappointed **FRUSTRATION**
This development causes us concern We are not equipped to cope with this new requirement We battle without much prospect of success	UNFAMILIARITY and INVALIDATION	Fearful Angry Anxiety **THREAT**
We are changing significantly and this is energizing We are developing alongside the company in a way which is enjoyable We have achieved major success and this confirms that we are headed in the right way	UNFAMILIARITY and VALIDATION	Enthusiastic Happy **EXCITEMENT**

Figure 2. Data structure: Categorizing emotions.

in drum life," which suggests validation and unfamiliarity (see Figure 2).

There were several, similar patterns across the themes. As evidenced through discussion with senior managers, Newtown was experiencing separation from the parent company during the time of our research, a process that involved realizing Newtown's latent competence while questioning and criticizing influence from Japan. This development propelled the organization forward in each of the other two themes; its approach to learning became more outward focused (e.g., paying heed to exemplar organizations) and started to make some progress in its quest to become a "solutions provider," rather than a manufacturer at the behest of Japan. Thus, during Time 1 (where Newtown was closely controlled by Japan), there is evidence of collective validation in the face of familiar, pleasant experiences. For the other two themes, "approach to learning" and "becoming a solutions provider," there is an emerging sense that these familiar, validating experiences are not sufficient to deal with other challenges and evidence of invalidation in the face of these experiences (e.g., "the company is stagnant and complacent").

Progressing on the journey to achieving independence from Japan involved Electroco realizing themselves (e.g., seeing themselves as separate from the parent company and making contact with the outside world) while destroying through rejection of Japanese practices the idea that Japan was in charge (see Figure 1). While doing so, to move closer

toward becoming a solutions provider, the company, over time, explored new areas (e.g., making closer contacts with customers) and increasingly challenging existing practice. This required a better and more outwardly focused approach to learning, with more emphasis on looking externally and being self-reflective in terms of how learning was managed. The following section outlines in detail these developments and their implications for unfamiliarity, invalidation, and emotion.

Time 1 (2003/2004)

Members accepted the strategy of the Japanese parent company and thought that learning was necessary but unplanned and that becoming a solutions provider was only a remote possibility. For the first strategic theme, connected with achieving independence from Japan, it seemed that people felt comfort, which we define as a sense of ease and freedom from anxiety or constraint: "It is difficult for us to release people for this mentoring role . . . anyway, the Japanese can provide better support." It was claimed that Newtown was highly regarded by the Japanese parent company. One experienced programmer suggested that any challenge could be easily resolved either through visiting Japan—"When we have been to Japan and come across good ideas we have tried to use them"—or having a Japanese expert spend time at Newtown—"For new model introduction the Japanese advisor advises me on types of information needed. He also

provides longer-term guidance, and he is even supposed to provide me with guidance on managerial style." Newtown was expected to receive instructions from Japan: "The Japanese like to retain control. There has been some slight change but it's a continual battle. They like to keep control." There was also little diffusion of knowledge from Japan that was of a strategic nature about new products (i.e., no expectation of involvement by Newtown in the product design) as suggested by a production team leader: "Information relating to products is all kept central out of our way. We don't get involved in it." The same informant considered Newtown to be first and foremost a Japanese company: "Because this is a Japanese company learning is on the job, as it was happening and is very product specific." According to the managing director, Japan did not encourage bringing into Newtown new approaches to manufacturing: "In Electroco's world we don't do that [independent product design] at the moment. We get told by engineers who come out and say 'this is the new part' and they do the processing. They then set the program up." Experiences of dependence on Japan at this time were described in terms of familiar and validated experiences and an emotion of comfort (or "quiescence"; Larsen & Diener, 1992).

For the second theme, "approach to learning," frustration was the commonest emotion that was expressed to us in 2003/2004: "I think the company is too stagnant, too complacent, there needs to be more movement." There had been recent change toward recognizing the need for a planned approach to strategic learning so that learning had become, according to one engineer, "much more planned than it was," but this still lacked a strategy: "There is no learning outside the constraints of the job." This frustration was based on reference to events that were experienced as familiar yet invalidating, involving awareness that Electroco's soft culture inhibited OL: "I would love to have more contact with customers but this doesn't happen at all." According to the training manager, learning had a low priority:

> [To many people] . . . working for Electroco is like being wrapped in a warm, fluffy blanket. . . no worries about losing your job or being off sick . . . they are cosseted, they don't have the knowledge, skills or motivation to change.

There was a high level of criticism by all our respondents of the company's approach to innovation, training, and learning—for example, from this department manager: "There is no guidance on performance appraisal." Staff were beginning to see themselves as in danger of becoming disadvantaged and vulnerable. This senior engineer's view is typical: "Not enough resources are available to support the opportunity to develop. . . . we should also be doing more team working exercises, and we should be doing that through the different levels and also across levels."

For the final theme "becoming a solutions provider," members thought that this was very much an early stage possibility for Newtown so that it was associated with the notion of "exploring" (see Figure 1). This was described by one engineer as a relaxed and unplanned process:

> We have done it a little bit in the past (made parts for outside companies). Companies have approached us and said "you've got a 10 tonne machine, have you got any capacity?" and we have done, I think it was more like the old boy network, somebody knew somebody . . . I think that's (in the past) how we've got outside work.

Another engineer corroborated the unplanned nature of exploring: "The specifications were provided by Japan but the new drum had to be sorted out technically without much help from Japan and that meant that we learned how to develop equipment specifications." Moving in this direction, however, involved the invalidation and "challenging" (see Figure 1) perceptions about Newtown's current activities (such as its approach to generating new business, acting on new insights from outside sources, and distance from the customer). There was the frustrating sense of Newtown being kept away from customers because those with the technical skills—the Newtown engineers—were seen as set apart from the end users of the product. According to this experienced programmer, "Maybe only 1 or 2 times in my career have I come to end customers because the problem is normally resolved much higher up the food chain." There was also a sense of threat, which we define as being caused to be vulnerable or at risk, or endangered. The sense of threat was that Newtown was too inward looking to innovate enough and that it lacked adequate absorptive capacity. For example, this departmental manager was openly critical: "The company isn't proactive enough for us to bring innovation into the organization. We need more trade fairs, more links with the outside." Getting in direct touch with customers was also seen to be held back by the dealers.

Time 2 (2005/2006)

At the second data collection time, there was an emerging sense of Newtown being under threat apparent for all three themes. For the theme "independence from Japan," realizing (see Figure 1) most informants such as this operative spoke about Newtown in terms of unfamiliar yet invalidated experiences: "They're telling us to be innovative, not to keep asking them things, to build our own capability, but this is hard to do when you've been told over the years 'do this' 'do that'." It was significant that Europe was being given equal weight with Japan and that the Japanese parent's technical capability was weakening. According to the continuous improvement manager, "20 years ago [the Japanese parent]

engineering section could design, and develop a solution globally, but now that's not the case." There was also evidence, for example, from the business planning manager, of more strategy independence for Newtown from Japan: "In the . . . old days it [the strategy document] used to come from one or two people. It was seen to be Japanese." There was awareness that separation invalidated previous experiences of parental protection and brought to the fore questions about Newtown's adequacy to meet these new challenges:

> The prospect is winding down and winding down and winding down and I know potentially we could automate the department to a high degree . . ., but all the time we are chipping away at our skills base that we'll never get back.

According to the continuous improvement manager, "We have been told for the last 10 years that you've got to start thinking about how you're going to add value as a business. One of them was to be able to add value to the sales companies." This was happening at the same time as Newtown's technical capability was growing as an operative told us: "In the past, we would just sit back and let an engineer come and sort it out; now we can do it ourselves." At the same time, several expressed unease at their own inability to become sufficiently innovative on their own: "I'm a manufacturing manager . . . This is totally alien to me." Some expressed unease on behalf of the whole company: "To me I'm not sure that you can train people to be innovative." There was also evidence of continuing dependence on Japan as expressed by this production team leader: "I've been to Japan several times and have been involved with information exchange meetings with sister plants in Japan, with the aim of picking any ideas which are better."

For the theme "approach to learning," there was an emerging sense of Newtown being under threat (involving the invalidation of expectations about unfamiliar events): "We are still not getting the basics right, and if we can't demonstrate that Japan are going to move even more of our business away." Describing the visit of a prospective consultancy company, the training manager shared with us his view of efforts at "self-improving" (see Figure 1): "They said the top management weren't working as a team, so there was no point in doing any further training in team working. I agreed with this, but we have put it on the back burner." Some employees felt frustrated that the company inhibited their career development: "I was probably the one who was earmarked for progression without necessarily having the training put in place to develop me for it." There was also an emerging separation from the parent company and a sense of disturbance (e.g., not being happy with having to get permission from Japan to move forward with new ventures).

For the theme "becoming a solutions provider," we continued to observe frustration: "It's getting the message across

to customers that we are here and we are able to deliver. That sense of reaching out and spotting opportunities is lacking at the moment. We need to make contact with the outside world." Other companies were seen as better sources of training and expertise, a matter of some strategic importance. For example, this molding's operative said, "I brought my own expertise [injection molding methods] from my previous company and used that largely. I wouldn't say it was expertise developed here at Electroco at all." One junior programmer suggested that experiences that were familiar were increasingly becoming seen as inappropriate: "Ideas like that (removing clutter) have been very good . . . but it's not moving outside any comfort zone," again highlighting the challenging phase that seemed necessary to prompt change.

Time 3 (2007/2008)

The change was noticeable in 2007 across the three themes. For the theme "independence from Japan," this was a time of localization: with the rejection of many Japanese practices, local innovation, proactivity, and ambivalence between rejection of the view that the parent company was necessary for survival and a desire to impress the parent company. Frustration and excitement characterized how employees expressed themselves about independence at this time. Frustration (represented in a destroying phase) involved rejection of familiar Japanese practices that had been invalidated through experiences (e.g., being less tolerant of Kaizen). According to a production team leader who had been involved in developing local variations in production independently of the parent company, the Japanese were no longer seen as dictating to Newtown: "Japan are saying, 'we want you to take the lead—don't wait for us—come up with a plan' . . . they are running out of technical expertise in Japan."

For the theme "approach to learning," the assumption that Newtown must now justify its own existence led to a self-improving phase (Figure 1). One such program of self-improvement involved a new system tailed for Volkswagen. According to the senior maintenance manager: "It's what it [the Volkswagen contract] represents as development of myself, my team, the capabilities . . . a whole new set of tools that we're learning, a whole new direction." Furthermore, instead of negative, invalidating things about themselves, Electroco Newtown became mimetic in finding positive, validating things to copy from role models, offering reassuring and inspiring examples of successful innovation of product offerings (highlighting the role of "looking externally"). There was however continuing frustration (invalidation about familiar experiences) about existing approaches to learning: "We don't understand what the problems are in the marketplace and they [the sales organization] don't understand what the problems are in manufacturing." The focus as expressed by a business planning manager was very much on

engineering and learning by doing: "Basically, you progress to management if you've led a production team." The managing director expressed a growing sense of threat (invalidation around unfamiliar experiences):

> I think there's a feeling, I may be right, that you cannot sustain two manufacturing plants in Europe and that if you look at it commercially, is there any logic in it maybe there isn't. Our view is OK if you go along that line then we've got to demonstrate we're flexible, adaptable, supportive and we can do everything for the Electroco group.

This sense of threat was expressed also by employees about projects—"I don't think there is a lot of that type of [innovative] project work. We are not an innovative organization"—and about customers—"We are too engineering focused. We need awareness of the market, global competition, who the customers are out there."

For the theme "becoming a solutions provider," these developments helped to validate this production team leader's sense that Newtown had capability as a solutions provider:

> I think the business is becoming more a service so we are offering the skills we've got as a factory, as a production site, as well as making the product but also servicing or providing additional support to the customer.

This involved exploration: "We developed our plan, did a load of development, loads of trial mixes and things like this, to reach this level . . . it's a new business section, a new market." In addition, a continuous improvement manager argued that "we are now actively involved in solutions for the customer which has all been home grown from our research and development team here at Newtown." This discussion about Newtown's own initiative was also mentioned by a business planning manager:

> Locally driven, locally developed, locally engineered . . . Newtown, out of this site. So we've grown, I mean from a position where it was zero into an organization now where 15% of the next year's gross margin is going to come.

A sense of Newtown being under threat seemed to coexist with excitement: "I think as an industry, as a business, certainly an objective of Electroco is to make us like an indispensable company, this is a home grown business this reconditioning." For example, a senior maintenance manager showed an awareness that ways of behaving would change away from the comfortable Electroco culture of the past and an excitement at perceiving unfamiliar yet affirming experiences with the customer: "We are trying to get involved with the European organizations that are providing end customer solutions like we did with the VW product through the card reader." A member of the senior management team commented, "One of the things we've been looking at (is) how to integrate the product and the user . . . that's just starting to take off now so you are now offering a totally flexible user interface." The same informant added,

> We're the only Electroco business that manufactures the toner for a third party company . . . it was new business . . . we developed it with the French and Japanese and we had to develop our plant too, we had a limited budget but we had to meet certain quality levels.

These evaluations across the three themes in terms of validation of the organization or invalidation of the organization as well as familiarity and unfamiliarity varied across the three time periods. In the first phase, 2003/2004, statements were generally about familiar situations. In the middle phase, 2006/2007, there was mostly invalidation and unfamiliarity that produced a sense of threat as well as invalidation relating to familiar experiences (which were increasingly seen as inappropriate to deal with the challenges ahead). In the last phase, 2008, all statements were either validation of the organization in unfamiliar situations or invalidation of the organization in familiar situations. The emotions expressed were largely frustration and excitement. Thus, not only had people come to feel validated by new obstacles, but they also came to find old practices and attitudes to be inappropriate.

Discussion

In this study, following the in-depth analysis of learning within one organization over a protracted period, we have examined the role of emotion, unfamiliarity, and invalidation in shaping OL.

Theoretical Contribution

A key issue in OL is capturing meaning that is collectively experienced, across the organization, beyond individual insights. We see OL as done *by* individuals *about* organizational problems (Friedman, 2001; Simon, 1991). Individual constructs (Kelly, 1955) were about the organization. Our data showed that shifts in individual members' interpretations of the strategic themes were shared, by members construing a strategic (i.e., a collective level) theme about their organization. This uses theory of strategic renewal (Crossan et al., 1999) and social construction (Elkjaer, 2004) to address the need for focusing on "the structure of constructs at collective levels of analysis" (Morgeson & Hofmann, 1999, p. 250).

The Implications of Construct Theory for How We View Emotion

Emotions that are experienced in the workplace vary not only in terms of direction (e.g., happy or sad) but also in terms of intensity (Ashkanasy, Hartel, & Zerbe, 2002). The circumplex model of emotions (Larsen & Diener, 1992) attempts to capture this range of feelings along two dimensions: First, emotions are defined according to their level of activation (e.g., stimulated and surprised vs. quiet and tranquil), whereas the second perspective captures the extent to which emotions are pleasant or unpleasant. The underlying constructs for our judgments around levels of activation and hedonistic state (Larsen & Diener, 1992) and unfamiliarity and invalidation (Kelly, 1955; McCoy, 1977) are articulated in Figure 2.

OL As a Sequence of Emotions

In our data, we found that two emotions were the predominant ones elicited by validation: comfort and excitement; comfort is the cognitive appraisal of a specific event or theme that confirms one's sense of security and faith in the existing constructs, whereas excitement is the cognitive appraisal that one is capable of succeeding in the face of substantial challenge and also that the opportunity opens new and desirable future directions, a sense of "rightness" about where one needs to head to be successful long term.

By contrast, for the factors associated with invalidation— "threat" and "frustration"—we found that frustration represents an appraisal that things could or should be done differently to achieve a more desirable outcome. Fear or threat is the appraisal of an event or theme over which it is perceived that one has little control, a sense that one may become overwhelmed by future developments. The familiar/ unfamiliar dimension highlights the extent of activation (Larsen & Diener, 1992); the logic is that in dealing with familiar experiences, there is low activation; therefore, limited energy is available to effect change. Whereas for unfamiliar experiences, high activation is generally found, so that energy can either be channeled into action or alternatively inwardly directed, thereby increasing levels of anxiety. Several similar patterns emerged regarding peoples' experience of emotion with reference to the strategic learning themes described above (summarized in Table 2).

Why the emotional journey should have varied as it did for the three constructs/themes is an interesting question. Differences may be attributable to the level of challenge that each is seen to present. The solution provider construct, for example, represented an entirely new way of working, and although some developments were seen to be successful, there was no apparent certainty that this success would be repeated, so that excitement was tempered by less optimistic

Table 2. Emotional Transition While (Re)construing Themes.

Reconstruing	2003/2004	2006/2007	2007/2008
We can become independent	Comfort	Threat	Frustration and excitement
We can do strategic learning	Frustration	Frustration and threat	Frustration and excitement
We can become a solutions provider	Frustration	Frustration and threat	Threat and excitement

thoughts and feelings. Becoming independent of Japan, however, once the initial shock and anxiety had been accommodated in the construct system, was rather seen as desirable and enabling for the company to step away from constraints inherent in the old experience that there was not the freedom to change. Similarly, for the theme "approach to learning," once the company had started to improve itself and to look externally, doing so may have been perceived as validating and exciting in its own right, with less of the deep-seated anxiety associated with the solutions provider construct, which included experiences that were inherently uncertain, such as the drawing in of new customers and the reinventing of business capabilities and practices (required to progress this construct).

Our data suggest that threat (invalidation in the face of unfamiliar experiences) arose from factors such as the enormity of the task, where people feel that they lack the freedom to change. Frustration was connected with thoughts suggesting a continual battle, where people were not getting the basics right, together with a sense that this was something they had not done before. Excitement, however, arose from perceptions that the company was using external role models to guide learning, recognizing, and emphasizing Newtown-developed skills, discussing success stories and seeing Newtown as separate from the Japanese parent. Although frustration and invalidation associated with the existing state of affairs seemed to be widely experienced (judged by the findings of this study), they seem to be unhelpful for explaining OL, because they suggest powerlessness and lack of purpose. However, frustration and threat had the potential function of acting as warning signals for senior management, suggesting that these emotions deserve to be understood, rather than being controlled or suppressed. Because of these suggestive links between emotion and OL, our work raises the possibility of influencing the prevailing "emotional culture" (Hartel, 2008) to facilitate and guide OL (and corresponding ways of construing).

Limitations and Future Research

Our study took place against an emotionally charged backdrop—the "parent" company's gradual withdrawal of expertise

and support from Newtown—and the company's efforts to achieve independence from Japan. This development in turn triggered interest in becoming a provider of business solutions (rather than remaining a manufacturer at the behest of Japan) and involved initiatives designed to open new opportunities (connected with the solutions provider construct). Although the setting provided the ideal opportunity for us to observe changes in meaning construction and progress over time, it represents a specific context raising issues that may not necessarily be exactly replicated elsewhere.

However, even if other organizations experience completely different challenges relative to those described here, construct theory can explain how meaning construction and the role of (in)validation and associated emotions may change. Furthermore, we detected in our data similar patterns of emotion arising over time for three different constructs. This suggests that the emotional journeys apparent here may apply more widely to different constructs in other organizational change processes. It would be interesting to explore this, by tracking changing meaning construal over time in other settings and perhaps making comparisons between cases with clear evidence of learning as opposed to those where little learning seems to occur.

Another key challenge for future researchers might be distinguishing OL as defined here from the rather broader notion of organizational change. Although the ideas are closely interconnected, we suggest that OL is less susceptible to external direction than is organizational change, that OL emerges from the experiences of those reflecting on a construct, and that it generally proceeds in a purposeful direction but that it can easily be derailed if validation fails to emerge over time (Simpson & Marshall, 2010). Our work provides some evidence in this direction, but further research could further confirm these important boundary conditions.

An important question is how organization members generate new constructs, as when, for example, the new construct—"independence from Japan"—emerged. The invalidation of experiences that are familiar to informants leads to frustration, which may in turn arouse the intention to address the invalidation (e.g., mastering protocols avoids criticism from Japan by keeping the workplace clean and tidy). Our data showed that, however, for those experiences that were relatively unfamiliar, invalidation seemed to elicit a sense of threat. This uncomfortable feeling may provoke a determination to look elsewhere, outside the existing construct system. In time, given continuing invalidation, one would expect the construct system to change. There may be a limit to the number of new constructs that can be dealt with at any one time. We identified only three overarching or "super-ordinate" constructs that were involved in OL at Electroco over the period of our study. It is possible that this represents the optimum number that can be processed, because each one draws on resources and makes emotional as well as cognitive demands on members.

Our study shows that familiarity, invalidation, and emotion are inextricably connected with OL, defined here as the collective reconstrual of meaning about questions of strategic significance for the organization. Organizational members make assessments about the extent of progress that has been achieved relative to what was anticipated, and construct systems are either validated, representing (perceptions of) successful experiences, or invalidated, signaling a need for adjustment and revision. Conceptualizing learning in this way heightens the need to understand how meaning reconstrual takes place (e.g., by looking externally and/or discussion of success stories). It also brings to the fore the interconnection between thinking and feeling, and spotlights the emotional journey that unfolds as OL occurs.

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