

2008

# The Liminality Associated with Project Teams: Exploring and Explaining Some of the Problems of ES Project Implementations

Sue Newell

*Bentley College, sue.newell@sussex.ac.uk*

Carole Tansley

*Nottingham Business School, carole.tansley@ntu.ac.uk*

Erica L Wagner

*Cornell University, elw32@cornell.edu*

Follow this and additional works at: <http://aisel.aisnet.org/ecis2008>

---

## Recommended Citation

Newell, Sue; Tansley, Carole; and Wagner, Erica L, "The Liminality Associated with Project Teams: Exploring and Explaining Some of the Problems of ES Project Implementations" (2008). *ECIS 2008 Proceedings*. 63.

<http://aisel.aisnet.org/ecis2008/63>

This material is brought to you by the European Conference on Information Systems (ECIS) at AIS Electronic Library (AISeL). It has been accepted for inclusion in ECIS 2008 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact [elibrary@aisnet.org](mailto:elibrary@aisnet.org).

# THE LIMINALITY ASSOCIATED WITH PROJECT TEAMS: EXPLORING AND EXPLAINING SOME OF THE PROBLEMS OF ES PROJECT IMPLEMENTATIONS

Sue Newell, Bentley College, USA and Warwick Business School, US, [snewell@bentley.edu](mailto:snewell@bentley.edu)

Carole Tansley, Nottingham Business School, UK, [carole.tansley@ntu.ac.uk](mailto:carole.tansley@ntu.ac.uk)

Erica Wagner, Cornell University, USA, Wagner, [elw32@cornell.edu](mailto:elw32@cornell.edu)

## Abstract

*The project space that develops to enable configuration and implementation of standard software packages is central to the success of creating a working information system. We investigate the IS project environment as a liminal space existing in-between the status quo and the new ES-enabled environment. Our analysis indicates that liminality can be beneficial to cultivate within the project team but that too strong a liminal space makes it difficult when it is time to incorporate the learning and the software back into the organizational working environment after the project finishes. We present mechanisms which can be used to create the liminal space and highlight the positive and negative impacts of creating a semi-permanent versus rotating liminality.*

Keywords: Liminality, enterprise systems, IS project teams, HR information systems,

## 1 INTRODUCTION

Projects are seen as a flexible form of organizing, overcoming some of the limitations of the traditional functional form of coordination (Gann and Salter, 2000) by bringing together representatives from different departments to work collaboratively to achieve a particular goal more quickly than would be possible if departments worked consecutively. Given the need for flexibility and speed of innovation to compete in the highly competitive and dynamic global market, project work has become common in all organizations (van der Gerben et al., 2003). Unfortunately, many projects fail to meet their deadlines, or fail to deliver output that meets expectations (Matta and Ashkenas, 2003). This is especially the case in relation to large-scale IT projects, such as Enterprise Systems (ES), which since the 1990s have become the de facto standard for the replacement of legacy systems. Thus, research has shown how the adoption of an ES can be long, complicated and problematic, sometimes ending in failure and often involving delays and budget over-runs (Shanks and Seddon, 2000; Robey, et al., 2002). This is because during implementation such packages have to be configured to meet the unique requirements of the specific situation (Spratt, 2000; Lim et al 2005), while at the same time business processes have to be radically changed if the adopting organization is going to avoid a lot of costly customization and exploit the 'best practices' supposedly embedded in the software (Willcocks and Sykes, 2000). Thus, ES adoptions involve both technical and organizational challenges, although the IS literature has tended to emphasize the organizational challenge (Robey and Boudreau, 1999; Markus, et al., 2000).

In this paper we consider these challenges by focusing on the ES project team that is tasked with accomplishing the implementation and so managing both the technical and organizational challenges. The project team is typically composed of both IT personnel and representatives from the departments where the system is going to be used. The project will be a learning experience for this team, which will need to creatively explore how the potentially powerful ES package can be exploited to transform organizational processes (Newell et al., 2004). At the same time, the project team must ensure that those who will eventually be using the system also learn and understand how to use it, as well as accept the

organizational changes that the project team is endorsing. This need for a mutual connectivity between the learning within the project team and the learning across the organization is not always easy because projects, by their nature and design, are to some extent isolated from the wider organization, relating to what Engwall (2003) describes as ‘lonely phenomena’ of projects. Indeed, it is this relative autonomy, and the degree of decision discretion that this confers on project members, that is seen to promote more creative and innovative solution development since it allows project teams to respond more flexibly and speedily to external demands, unconstrained by the normal hierarchical and functional boundaries (Gann and Salter, 2000) that restrict communication and interaction in bureaucratic organizations. Scarbrough et al., (2004) demonstrated how this isolation between the project and the wider organization can have a detrimental impact on learning achieved from the project to the wider organization.

This analysis is helpful in demonstrating the problems associated with the nested nature of learning between the project and the organization. In this paper, we use the concept of liminality to further explore how and why large, organization-wide ES projects often run into difficulties in terms of creating technical and organizational solutions that meet expectations. This liminality lens helps us to understand the dichotomy between freedom and ambiguity that defines project work. Some of the *freedoms* created by the project-form of organizing can have beneficial effects at the level of individual project members and at the project team level, even while it creates problems for the transfer of developed solutions to the wider organization. At the same time, the *ambiguity and transitory-state* associated with liminality can create problems for individual project members and project teams, even while the organization benefits from such temporary arrangements. Our research questions are thus: how does the liminality associated with project work help to explain some of the opportunities and challenges associated with ES implementations? How does the liminality concept help to explain some of the paradoxes associated with people’s experiences of working on project teams? How does the concept of liminality help us to understand some of the conflicts and misunderstandings between those on the project team and those they are supposedly representing? In considering these questions we illustrate the paradoxical nature of liminality, as it affects, for better and/or worse, individuals, project teams and organizations in the context of an ES implementation. As we will see, the paradox arises largely because gains and losses between individuals, project teams and organizations are not self-reinforcing. Rather, gains can often accrue to one party – e.g., individuals – even while another party – e.g., the organization – loses out. We first consider the characteristics of liminality before describing the cross-case research methodology informing this study.

## 2 LITERATURE REVIEW

‘Liminal’ is derived from the Latin word ‘limen’, which means threshold. The term was used by van Gennep (1909) when he was writing about rites of passage. He identified three phases as a person moves from one social status to another – separation, transition and incorporation. It is during the transition phase that people experience the liminal condition; after they have been separated from their previous way of life but before they enter a new social category and new way of life. For example, the transition from childhood to adulthood is marked in Western society by a number of different rites of passage, for example being able to vote, being able to buy an alcoholic drink, moving away from home to go to college. Thus, the transition occurs gradually through a series of passage points so that the separation and incorporation does not translate to a single, clear cut separation (from the old social status), through a transition phase and finally to an exit (into the new social status). In other societies this transition is more clear-cut. For example, the Maasai people in Kenya, send adolescent boys away from the village to live together for anything from 8-12 years or more to learn to become warriors. These ‘boys’ will eventually return to the village and become the next generation of ‘adult’ male warriors. Thus, the liminal condition in these different examples is more or less permanent; in Western society there are a series of cyclical separations, transitions and incorporation phases so that the individual gradually shifts to adulthood,

whereas for the Maasai the transitory state involves a more abrupt separation and the return to the village is a single passage point back to incorporation.

During the transitory or liminal phase they are 'betwixt and between the positions assigned and arrayed by law, custom, convention and ceremonial' (Turner, 1977: 95), living 'at the limits of existing structures' (Tempest and Starkey, 2004: 507). The transition phase is thus liminal in the sense that it is a period of ambiguity, when the person is in a social and cultural limbo. This limbo state has both negative and positive connotations: people in a liminal phase are 'temporarily undefined', beyond the normative social structure. For example, in the United States during this liminal phase a 'young adult' is one who does not yet have the full rights of an adult and is also no longer a child with limited responsibilities. This weakens them, since they have no rights over others. But it also liberates them from structural obligations' (Turner, 1982: 27). In this sense, liminality can be both painful and enjoyable (Rottenburg, 2000), freeing the person from institutional constraints but at the same time marginalizing them.

The term liminal has been used to describe the condition of temporary employees in flexible organizations (Garsten, 1999); to discuss the consulting experience (Czarniawski and Mazza, 2003); and to consider the impact on individual and organizational learning (Tempest and Starkey, 2004). In this paper we use the term to describe and analyze the experience and impact of individuals assigned to work on an ES project since, as we will show, many of the conditions of liminality apply to such project teams. Moreover, we will show how some of the ambiguous and paradoxical aspects of liminality help us examine and explain not only these project members' experiences but also the dynamics and outcomes of the projects themselves. This paper thus builds on existing work in the IS field which has considered the change process that constitutes IS projects, recognizing how this is best theorized as iterations of change and order over time. However what has not been considered is the opportunity that exists if one conceptualizes the project itself as a unique phase – not one to be transitioned out of as quickly as possible, but one that is crucial if an appropriate and inventive system is to be created. We next consider some of the characteristics of liminal space that we can apply to project work and project workers.

One of the first characteristics of a liminal phase is that it is *temporary*, hence Garsten's (1999) use of the concept to explore the experience of temporary workers. Organizations use temporary employees precisely because this allows them to be more flexible – adding and reducing headcount as and when needed – and in doing this creating 'liminal subjects in flexible organizations' (Garsten, 1999). Project teams are very similar since they are also used to give organizations more flexibility, while for the individuals involved it means that they have a temporary and transitory assignment, upsetting the traditional psychological contract based on long-term and stable employment assignments (Ho et. Al., 2006). Whether this is experienced 'for better or for worse', depends on a number of features of the project work assignment, as will be shown in the analysis.

A second characteristic of a liminal phase is that it is *ambiguous*, since people in liminal space 'slip through the network of classifications that normally locate states and positions in cultural space' (Garsten, 1999: 606), offering both risks and opportunities simultaneously and for both the individuals and the organizations involved (Tempest and Starkey, 2004). Thus, Garsten uses the concept of liminality to describe how temporary workers are 'strangers in the workplace who are socially under-determined'. For Turner (1982) this ambiguity provides those in a liminal phase with the opportunity to upset normative orders and transcend institutional boundaries; a seedbed of cultural and social creativity. The ambiguity exists because activities are performed 'backstage' – separated from mainstream organizational activities. The ambiguous nature of a project assignment may thus lead to feelings of marginality and/or potency, inferiority and/or release.

A third and related characteristic of a liminal phase is that it involves *freedom*, from structural and

institutional constraints and obligations – ‘whereas structure entails systems of classifications, models of thinking about culture and nature and ordering life, institutionalization and norm governing, the liminal phase involves a challenge of structure and its attributes’ (Garsten, 1999: 605). This interstructural aspect of liminality provides freedom in two senses: freedom *from* institutional obligations (technical and bureaucratic) prescribed by the organization but also freedom *to* enter new symbolic worlds and to transcend social structural limitations and to play (Turner, 1982). Likewise, Hagen et al., (2003) discuss how the liminal space provided by education (studying an MBA) can provide the opportunity to critically examine dominant orthodoxies. The new opportunities that are available in the liminal space, however, may also come with risks and new demands on skills and competencies (Grasten, 1999). Thus, during this time creativity and innovation are enhanced, since innovation occurs most often at the interfaces and thresholds. However, this freedom may be threatening to individuals who are insecure or lack expertise, even while for others it is liberating and exhilarating, offering new learning and career opportunities.

A final characteristic of a liminal phase is that it encourages a strong sense of *community* with those sharing the experience, even while it creates a divide between those ‘on the outside’ (Czarniawska and Mazza, 2003). This strong sense of community within is important because, as Wenger (1998) argues, knowledge generation rests on sense-making, and sense-making occurs within the context of communities of practice. The paradox here is that there may be a strong community among those sharing the liminal space while at the same time the lack of connection with those within the existing ongoing organizational structure can mean that liminality threatens the social capital within the organization (Tempest and Starkey, 2004). In other words, project teams may be isolated from, rather than embedded in, the wider organizational context. Yet we know that people and their practices are embedded in their work context (Cook and Brown, 1999) and that technologies that are not aligned with the existing social and technical context will be resisted (Hsiao et al., 2006).

This discussion of liminality, as it may apply to an ES project team, recognizes its paradoxical nature, having positive connotations – play and transcendence of existing institutional structures - but also negative connotations of marginality, with weakened power and reduced access to resources.

### **3                    METHODODOLOGY**

In this paper we compare phenomena across two ES implementation project case studies in order to enhance contextual richness, ensure greater analytical leverage and induce understanding at the individual, project and organizational level (Raub, 2001). Both researchers were informed by an interpretive epistemology (Walsham, 1993; Klein and Myers, 1999), employed the same narrative interview technique (Bauer, 1996) with the objective of collecting and collating ‘thick descriptions’ (Geertz, 1973), and focused data collection on the same unit of analysis — implementation of an ES.

We interviewed key participants regarding their project experiences, and conducted observations and systematic review of official project documentation. The cases here are designed to seek ‘validity...not [from] the representativeness of the case in a statistical sense, but on the plausibility and cogency of the logical reasoning used in describing the results and in drawing conclusions from them’ (Walsham, 1993; p 15). The paper’s findings are based on the comparative analysis of how liminality was created within each case and the impact of this on individuals, the ES projects and the organizations. Cross-case analysis allowed us then to draw out relationships that can help to build theory. Each author separately conducted the fieldwork related to one of the two cases. In neither case was the initial research focus specifically on liminality; rather this issue emerged as the authors discussed insights from their respective case. This subsequently led us to analyze each case in terms of this important, emergent issue.

Collecting diverse forms of data helped us to seek multiple interpretations to improve the ‘plausibility

and cogency of our interpretive accounts' (Klein and Myers, 1999). Our field work resulted in different but complementary insights: In Ivy we saw how the project structure isolated the team so that the proposed solution was not immediately accepted, leading to extensive negotiation and rework in the post-implementation period. In Epicurea we followed the team through an 'epiphany' that allowed them to build an ES that transformed the HR function. Our analysis involved fully articulating the dynamics of each case study and then developing a shared perspective based on the themes that were present in either one or both settings. To accomplish this each researcher individually reviewed her qualitative data and constructed a case description highlighting how liminality was created and how this influenced outcomes at different levels. These write ups, along with a list of emergent themes, were shared with one another in order to compare the cases and consider the principles of dialogical reasoning and suspicion in order to further improve our interpretive accounts (Klein and Myers, 1999). An iterative process of cross-case discussion and fine-tuning of the case descriptions helped us to identify mechanisms that create separation into the liminal space. In analyzing the data we looked for pattern codes which can provide explanatory or inferential meta-codes that allowed us to identify an emergent theme, configuration, explanation or 'repeatable regularities' (Miles and Huberman, 1994, p69). The analytical themes were then organized around these mechanisms which allowed us to develop a coherent sense of the impacts across cases. Unfortunately, given the limitations of space we are not able to present the 'thick' case descriptions that were collected but rather can only summarize our findings through our analysis.

#### **4 CASE DESCRIPTIONS AND ANALYSIS**

"Ivy" University is one of the eight Ivy League institutions located in the Northeast region of the United States which are grouped together for their academic excellence and selective private education. The governance structure of Ivy is relatively decentralized with administration taking place both in the disparate academic and support departments and then consolidated and reconciled centrally in order to report financial status and meet regulatory concerns. In the late 1990's Ivy experienced an increasingly complicated regulatory environment as an institution with a multi-billion dollar endowment and the recipient of sponsored research funds and governmental grants making the fiduciary responsibilities significant. In this climate, Ivy embarked on an ES project in order to replace all administrative systems and create an integrated operating platform for the 21<sup>st</sup> century. The enterprise computing model was expected to increase fiduciary control and decrease audit risk while funneling more administrative responsibilities from the central administration to academic and support departments. Ivy contracted with a single software vendor ("Vision") to develop two new modules and then implement an enterprise solution particular for the higher education context. After a year long delay, the entire ES suite was implemented across the University in the summer of 2000 at which time the academic departments refused to work with the financial management module and the project team had to then develop customized software to accommodate their demands.

Located in the United States and founded in the mid 19th century as a family firm engaging in food processing, Epicurea's business interests now cover five customer segments in 63 countries: food; health and pharmaceutical; financial and risk management and industrial. More than 149,000 employees work across a range of areas including: fields, laboratories, offices, production facilities and trading floors. When the CEO announced he wanted to increase momentum in the push for global business development, a major initiative was launched to consider business improvements enterprise-wide. Presidents of each functional area in Epicurea (Finance, Human Resources etc.) were asked to begin working towards improving information management via appropriate technology implementation by bidding for internal funding for ES development work. The ES was successfully implemented on schedule and within budget. In the analysis below, we consider some examples of the characteristics of liminality (Table 1) that were introduced earlier in the paper. These characteristics act as mechanisms for creating an in-between space within which project work exists.

**Table 1: Liminal Characteristics**

Temporary: Liminality is, by definition, only temporary, A project is by definition a temporary assignment so that the team member knows that they will eventually move on, albeit it may be unclear what this move will involve.

Ambiguity: A liminal space is ambiguous in the sense that a person does not fully understand what is involved. In the context of a project this liminal characteristic can cause both the upset of normative orders and be a seedbed of cultural and social creativity.

Freedom to/from: In a liminal condition, a person is free to experiment because they are freed from the constraints of the social setting which they have left behind.

Community: This characteristic of the liminal phase encourages both a strong sense of community in the project team whilst possibly creating a divide with those on the 'outside'.

We consider how these liminal characteristics can be used as mechanisms to assist the movement of each case organization into the transitional stage where the liminal condition is experienced. In the discussion section we then consider the final phase of incorporation in order to understand how different approaches to liminality can lead to positive and negative implications for individuals, groups and organizations.

**Ivy**: As Ivy sought to modernize their administrative infrastructure for the 21<sup>st</sup> century, they decided to do this by **separating** the initiative from the daily operations, creating a project with a full-time core of Ivy employees. The core team formed the “nucleus”, an indispensable small group whose departmental jobs were back-filled for the initiative’s duration. Supporting the project with resources enabled the work to get done without taxing University daily operations. The people selected for the project initiative were, thus, completely separated from their previous job responsibilities and moved to the project space. Ivy employees were sent away from the main University campus to work together with others who had been selected until the project was successfully completed. At Ivy, the temporary project initiative existed for a significant period of time, during which the project team was clearly separated from the rest of the University and it is in this in-between space that they experience the liminal condition.

The movement into phase two – **transition** – where one experiences the liminal condition was dependent upon the divestiture of old ways and the entrance into a more ambiguous space. The ambiguity of the project space is exemplified through the naming of the project. Project X was initially used simply because no name was immediately forthcoming. However, this name stuck and became associated with the X-Files TV drama, denoting mystery and something slightly unreal and imaginary/super-natural. The ambiguity experienced during this transitional phase exists because of the lack of social and cultural norms. This gave team members the freedom to experiment and explore options that were not restrained by the ongoing daily operations. At the same time however, the secretive nature of the name added to the sense that highly confidential work was going, the details of which were not discussed and this proved alienating to those external to the project team. The naming the project not only influenced the ambiguity experienced, but also affected the extent to which the project team identified itself as a separated community. The liminal characteristics together help to solidify the in-between space.

Thus, at Ivy, the project team members were creating their own environment – one that existed outside the cultural norms of the University – where they were given additional freedoms and the expectations of job skills and responsibilities was more in line with the corporate project management world than the 37.5 hour Ivy administrative work week. Recognizing that this initiative was a temporary and transitory space the team took advantage of this to ‘think outside the box’ and create a new administrative environment for Ivy. Freedom from structural and institutional constraints was demonstrated through the creation of a dedicated, well-resourced project building that was used for the duration of the project. However, this isolated the team members from their organizational colleagues who were not involved.

This freedom from the physical constraints of ‘the office’ in Ivy appeared to give team members a sense that they did not need to be tied to existing structures and processes but rather had the freedom to experiment with new ways of working. Ivy data indicates that “kinship” was an important part of the freedom of liminal space.

Those involved in Project X didn’t just separate themselves from the wider University, they created a sub-culture – an identity with a particular language – one that “outsider(s) wouldn’t understand because they hadn’t been part of it”. This sub-culture actually is juxtaposed against the broader Ivy culture which historically has trouble making decisions because of its consensus orientation. As noted by one functional leader in spite of a large number of people ‘the project was able to get in a room and make important decisions efficiently.’ This ingroup sub-culture was further enhanced by the way project members were selected. That is, in Ivy, members were selected explicitly because they were ‘the brightest and the best’. This gave the team a community feeling that they were all regarded as equally, highly talented. This meant that those outside the team were not considered to be part of this elite group, causing some resentment from those left to pick-up and continue ‘business as usual’. Furthermore, those alienated in this way felt that their work practices were being ordained by individuals who may never have done the job for which they were mandating practices. The Ivy team was, thus, seen by others in the organization as being part of the ‘out-group’. As the scope of Project X broadened and the team expanded, inter-group dynamics surfaced. As the senior Vision consultant pointed out in the last year of the project, the teamwork was different from what he was used to when implementing enterprise-wide systems and his employees who had been working on-site at Ivy for the previous year had adopted the work approaches of the Ivy team. This speaks to the strength of the liminal space to create an ethos and indoctrinate it to new entrants.

**Epicurea:** Liminality was experienced in Epicurea as a series of more minor rites of passage, involving cyclical separation, transition and incorporation phases. The HR specialist project team members were assigned part time to the initiative, even the project leader, so that they continued to work both on the project but also in their departmental home. The full time IT specialists supporting the project were familiar with working on temporary projects as this constituted their normal job specification. Epicurea project members were, therefore, not **separated** from the daily operations of the company for long periods, rather they exited and entered the project space continuously over the lifecycle of the initiative – in this way the temporary nature of the project was more readily experienced on a daily basis.

The team members experienced transition to the liminal condition as having a hybrid role where they are ‘temporarily undefined, beyond the normative social structure’ because of their role in both worlds. The project members were in some ways freed from institutional constraints and this actually appeared to energize them in relation to their day-to-day HR role. The project team had no dedicated project space but either used available meeting rooms on the site where they were going to gather in a particular country or simply worked at their functional office location for other project activities. Epicurea also experimented with ideas about how the ES might transform work practices, but in doing this worked closely with their functional peers to understand the implications of any changes that were being proposed. This enabled them to check out that their HRIS project development work was appropriate for HR practice back on their sites, educate their businesses on what was happening and remain fully informed when developing their HR strategies, policies and practices.

Moreover, although the team leader did want to ensure that she had highly competent people on the team, the strategy of selecting ‘the brightest and the best’ was never articulated and so did not appear to create the same level of resentment outside the team. Furthermore, these project members retained their permanent positions on their ‘home site’ and so were seen by others to be a part of’ Epicurea’s ongoing concern – staff among staff. Even though a strong sense of project team community and high morale was

developed through social activities, the ingroup-outgroup identification seemed to be less strong. With out-group identification there was initial resistance from the HR manager and business manager client groups but trust was built into these relationships from the beginning and steps taken to maintain this throughout the project.

The functionally descriptive name of the Epicurea project (HRIS: Strategic HR Information Management Project) was advantageous because it enabled initial funding of the project, as IT projects had a poor record of success in the company. The name also helped to show the ‘bounded’ nature of the project and therefore reduced the potential for project ambiguity. This did not mean that there was no ambiguity because at the outset, project team members were not clear about what a strategic HRIS project could achieve, but this ambiguity was about how to enact the strategy, not about the project scope.

In Epicurea there were clearly issues between the functional areas of HR and IS in the first instance. At the first meeting they had difficulty in getting together as one group with a like mind about HRIS and each functional area described each in less than complimentary ways. Once they had worked to achieve a ‘like mind’ as a cohesive group they found that as an in-group they were in conflict with the HRIS technical staff and with country HR management. However, this, too, was averted through negotiation and debate and the building of trust relations. Overall, the HRIS team enjoyed working together as one team, with the part-time HR members having the freedom to discuss HR transformation away from their home sites. Getting away from ‘the day job’ provided the opportunity to develop innovative ways of thinking about taken-for-granted issues whilst at the same time developing a collective understanding about addressing such issues.

## 5 DISCUSSION AND CONCLUSION

In the analysis above, we have identified how liminality was created in the two case companies where particular characteristics (transitory, ambiguous, freedom and community) were used as mechanisms for producing an environment within which project work exists. More specifically, the cases suggest that mechanisms were used differently in the two organizations, so that we are able to contrast a transition that is semi-permanent (Ivy) from a transition that is more rotational (Epicurea). In the semi-permanent liminality of Ivy, project team members are isolated in the transitory liminal phase for the duration of the project while in the rotational liminality at Epicurea, the project team enters – exits – re-enters continuously throughout the duration of the project, like a rotating door. In this section, we consider how this impacted the incorporation of both the team members and their technological solution as they moved back into the main organization. In looking at Table 2, it should be noted that in reality there is overlap between the characteristics and the mechanisms employed. For example, naming the project not only influenced the ambiguity experienced, but also affected the extent to which the project team identified itself as a separated community. Nevertheless, we have matched the mechanisms with that aspect of liminality which appeared from our analysis to be strongest, given our case data.

**Table 2: Mechanisms used to create semi-permanent or rotational liminality**

<b>Liminal characteristics and Mechanisms</b>	<b>Strong separation and semi-permanent liminality</b>	<b>Weak separation rotating liminality</b>
<u>Transitoriness</u> e.g. Deployment of personnel to project	Full-time project membership	Part-time project membership
<u>Ambiguity</u> e.g. naming of project	Project X – mystery	Shrimp – functional name
<u>Freedom</u> e.g. degree of physical separation	Dedicated project building	No project home
<u>Community</u> e.g. selection of staff	Brightest and best – exclusive	Staff among staff

In both cases, liminality appeared to facilitate ‘thinking outside the box’ and so creating a transformational solution around the ES. Liminality also, more broadly, influenced the individuals who had experienced this transitory state and had been changed by it. These effects seemed to be similar across the two cases. However, the different types of liminality created in the two cases appeared to influence the interactions between the team and the rest of the organization and so influenced the extent to which they were embedded in the work context of those who would eventually be using the system. Differences in the degree of embeddedness, created by the two types of liminality, in turn influenced the acceptance of the solution presented at the time of incorporation.

From the perspective of the individuals involved, being involved in the project led them to gain new skills, which improved several individuals’ personal career trajectory. Several of the key players in both organizations, thus, changed careers at the end of the project, even though prior to this they had not intended to do this. For some these career changes were within either Ivy or Epicurea, but in both cases there were some individuals who moved on so that the organizations themselves lost valuable human resources and knowledge related to ES-enabled operating practices and so did not benefit from the skills development that they had supported. Career development was thus wholly beneficial from the point of view of the individuals involved in both these cases, even though this was not the case from the organizational perspective. Such impressive career development may not always be the outcome of such a liminal experience, however. For example, liminality for the temporary workers discussed by Garsten (1999) was not necessarily related to significant career advancement.

From the perspective of the project team itself, liminality offered a space where members were freed from existing institutional constraints and this helped them to produce creative solutions. As we saw in both the Ivy and Epicurea cases, project team members developed a strong sense of kinship with each other and embraced the project as an opportunity to redirect the organization’s future. In both cases, all functional members were initially completely unfamiliar with ES software but in both cases they developed solutions that were very different to the existing practices in their respective organizations. At Ivy although team members initially felt overwhelmed and lost, unclear of what they could contribute to the project, they eventually developed a conceptual schema for what they considered would be a ‘more professional’ administration system for Ivy. In Epicurea, the HR members of the team also initially were unclear about what the HRIS was all about, but over time they worked together to develop plans for future, more integrated HR strategies. In both cases, therefore, the project team developed a strong sense of community (an in-group) and through this they were able to envision how the ES could transform work practices. Again, this strong sense of community may not always accompany a liminal experience. For example, the high value placed on adaptability of some temporary workers - displaying the right attitude and competencies – can contribute to an individualized experience which is more strongly felt than the notion of sharing and belonging (Garsten, 1999, p615). However, in both Ivy and Epicurea it was community rather than individualism that was more strongly pronounced and this did not appear to be significantly influenced by whether the liminality was semi-permanent or rotational. This did influence, however, how the proposed solution was accepted by the organizational users once implementation began.

Thus, from the perspective of the organizations involved, the visions and associated systems created in the two cases were accepted very differently when they moved to **incorporate** the system into the operational environment. In Ivy, the strong sense of community within the project team and being cut off from the everyday communication and information of the rest of the organization lead them to largely ignore the needs of those they supposedly represented. Although the team members sought to engage users including faculty at the outset of the project, over time they became insular in the way they worked and prided themselves on the “family” and “kinship” that had been created enabling them to be more

creative and ‘think outside the box’, not constrained by the everyday embedded work practices of their colleagues, but also not aligned with these existing practices. This divestiture was created through the way the liminal mechanisms were used in the Ivy case, for example in the naming of the project, the allocation of significant resources, the selection of the ‘best and the brightest’, the back-filling of jobs, and the isolation of the project team. In this way Ivy maximized liminality in their project but at the expense of isolating it from the technical and social work context of the broader user community. At Epicurea, on the other hand, the project was less strongly separated from its daily operations. Not only were the HR managers working part-time on the project but they also had their ‘day job’ for which they continued to be responsible. This allowed them to be involved in the development of both HR and the HRIS vision, strategy and policy and work on alignment between the two. The only full-time project members were IS staff used to working on temporary projects. The project was not without conflict, however. Thus, HR and IS team members each initially commented in less than complimentary ways about each other; initially there were negative responses from the HR specialist clients to the technical leader; and the project leader had to spend considerable time engaging to convince business managers about their vision. Much effort was given to developing positive relationships during the transition phase between team members and with other stakeholders and this appeared to be facilitated by their role as staff among staff. In this way the Epicurea project team remained socially and technically embedded and this allowed them to create a solution that aligned with the existing work practices even while these work practices were dramatically changed by the new HRIS.

Project members, especially employees, may not be barred from information channels and locales, but as indicated in the introduction, projects can be ‘lonely phenomenon’ (Engwall, 2003) since the project organization encourages them to separate and eventually lose touch, especially if they are assigned to the project full-time and the project is of long duration. This fragile connection to others in the organization enhances a sense of community with those in the same liminal space (Turner, 1969) that can help to foster a strong collective and egalitarian identity, stripping away differences in rank and status. However, the Epicurea case suggests that this strong sense of community does not necessarily have to be associated with a strong separation from ‘the other’, that is the rest of the organization. The Epicurea project was, in this sense, less ‘lonely’ and more socially and technically embedded than the Ivy project.

This difference in terms of the ‘loneliness’ of the two projects created by either the semi-permanent or rotational liminality, thus influenced how far the solution was initially accepted during the incorporation phase. In Ivy, given the rejection by users, a lot of time and effort was spent in post-implementation negotiations leading to cost and time overruns in order to meet user needs. Thus, at Ivy the incorporation phase was extended beyond the initial installation of the ES. In fact, it was only after an extended period of use that the rite of passage was finalized through acceptance of the ES. The period of incorporation was much more rapid in the Epicurea case. However, the Ivy case illustrates that while engaging users after installation can be more expensive than if done during the project, it can still be successful. Once the users were actually working within the ES-enabled environment the project team were able to better hear what aspects of the design were limiting their work practices. During this final phase a new way of working became stabilized through the creation of a working ES. At Epicurea the incorporation phase was much more rapid but the transition had nevertheless allowed a critical, strategic ‘lens’ to be turned back on the strategy work of the HR function, which added value to their work for the organization.

In conclusion, the liminality lens, in conjunction with an understanding of the embeddedness of work practices, has helped us to examine and explain both ES project members’ experiences and project dynamics and outcomes. Those in liminal space have potential to be both the agents of change but also perhaps, its victims. In the two cases, there were no individual victims, but this may not necessarily be the outcome, especially for individuals who cannot cope with the initial ambiguity of such a transitory working environment. Moreover, what may be positive at one level – e.g., for the individual, may be

negative at another level – e.g. the organization. For example, the strong sense of community within the project team and being isolated from the embedded work practices of the organization may lead the project team to ignore the needs of those they supposedly represent even while it gives them the opportunity to be more creative and ‘think outside the box’. Or, an individual’s opportunity to be engaged in an ES project and gain new skills may be good for his/her personal career trajectory, but if they decide that opportunities are greater outside the organization, the organization itself may lose a valuable human resource and not benefit from the resources that have been spent on creating this increased human capital. This is a particular problem in relation to ES projects, where expertise of such technologies is widely sought, resulting in a loss of expertise once implementation is achieved even though such expertise is vital in the post-implementation period when the value is most likely to be exploited only if there is sufficient human capital support for this.

More generally, our liminal lens helps us to understand that there are multiple ways to successfully implement an ES and that the type of liminality created for the project team will influence how they achieve this. While ES packages are currently being sold as 'best practice' software, organizations are challenged to apply these prescribed practices to their local situations. During the incorporation phase users must evaluate the extent to which their local work practices are of greater value than those mandated by the ES. In both our cases, the working ES represented a negotiated outcome that preceded its acceptance into the local community; albeit this occurred more quickly in the Epicurea than the Ivy case because of the differences in the type of liminality created and the resulting extent to which the project was isolated from the embedded work context. For this reason an analytical understanding of negotiating through a uniquely liminal phase to a reordering of work life should be a part of any IT project management strategy. As Hammer said at the 2002 Strategy World Conference (Said Business School, 2002) “execution is strategy” in contemporary society. It is not merely the strategic plan - the grand vision - that creates organizational success but rather the ability to negotiate end-to-end operational processes that is key for maximizing potential. Liminal spaces can be reflexive spaces for future strategy development. The findings also illustrate that fostering a strategic vision requires translating the vision into purposeful action and that this can be achieved either during the transition or incorporation phases (or both). For practitioners this suggests that while control of IT is illusory during project management, the cultivation of relationships between a grand strategic vision and small daily stories can foster empathy during times of uncertainty and change. Similarly, this suggests for IS research that ES project work within organizations is as much about embracing the in-between time as unique and important as it is about maintaining a hold on the daily operations of the business. We encourage fully embracing the rite of passage as a precursor to creating an enterprise-wide infrastructure.

## References

- Bauer, M. (1996). *The Narrative interview: Comments on a Technique for Qualitative Data Collection*, School of Economics and Political Science, London.
- Cook, S. and Brown, J-S (1999). Bridging epistemologies, *Organization Science*, 10, 4, 381-400.
- Czarniawska, B. and Mazza, C. (2003). Consulting as a Liminal Space, *Human Relations*, (56:3), 267-290.
- Engwall, M. (2003). No Project is an Island: Linking Projects to History and Context, *Research Policy*, (32:5), 789-808.
- Gann, D. M. and Salter A. J. (2000). Innovation in Project-based, Service Enhanced Firms: The Construction of Complex Products and Systems, *Research Policy*, (29), 955-972.
- Garsten, C. (1999). Between and Betwixt: Temporary Employees as Liminal Subjects in Flexible Organizations, *Organization Studies*, (20:4), 601-617.
- Geertz, C. (1973). *The Interpretation of Culture*. Hutchinson, London,
- Hagen, R., Miller, S. and Johnson, M. (2003) *The 'Disruptive Consequences' of Introducing a Critical*

- Management Perspective onto an MBA Programme, *Management Learning*, (34: 2) 241-256.
- Ho, V., Rousseau D. and Levesque, L. (2006). Social Networks and the Psychological Contract, *Human Relations*, (59:4), 459-481.
- Hsiao, R-L., Tsai, S. and Lee, C-F. (2006). The problems of embeddedness, *Organization Studies*, 27, 9, 1289-1317.
- Klein, H. K., and Myers, M. D. (1999). A Set of Principles for Conducting and Evaluating Interpretive Field Studies in Information Systems, *MIS Quarterly*, (23: 1), 67-92.
- Lim, Eric T. K., Shan Ling Pan and Chee Wee Tan. (2005). Managing user acceptance towards enterprise resource planning systems - understanding the dissonance between user expectations and managerial policies, *European Journal of Information Systems*, (14: 2), 135-149.
- Markus, M. L., Axline, S., Petrie, D., and Tanis, S. C. (2000). Learning from Adopters' Experiences with ERP: Problems Encountered and Success Achieved, *Journal of Information Technology* (15), 245-265.
- Matta, N. and Ashkenas, R. (2003). Why good projects fail anyway. *Harvard Business Review*, (81: 9), 109-115.
- Miles, M. B. and A. M. Huberman (1994). *Qualitative Data Analysis: An Expanded Sourcebook*. Sage, London.
- Newell, S., Huang, J. and Tansley, C. (2004). Social Capital and Knowledge Integration in an ERP Project Team: The Importance of Bridging AND Bonding. *British Journal of Management*, (15), 43-57.
- Raub, S. P. (2001). Towards a knowledge-based framework of competence development" in *Knowledge Management and Organizational Competence* (Ed, Sanchez, R.) OUP, Oxford, 97-113.
- Robey, D. and Boudreau, M.-C. (1999). Accounting for the Contradictory Organizational Consequences of Information Technology: Theoretical Directions and Methodological Implications, *Information Systems Research* (10:2), 167-185.
- Robey, D., Ross, J. W., and Boudreau, M.-C. (2002). Learning to Implement Enterprise Systems: An Exploratory Study of the Dialectics of Change, *Journal of Management Information Systems* (19), 17-46.
- Rottenburg, R. (2000). Sitting in a bar", *Studies in Cultures, Organizations and Societies*, (6), 87-100.
- Scarborough, H., Swan, J., Laurent, S., Bresnen, M., Edelman, L. Newell, S. (2004). Project-based Learning and the Role of Learning Boundaries, *Organization Studies*, (25: 9), 1579-1600.
- Shanks, G., and Seddon, P. (2000). Editorial: Enterprise Resource Planning (ERP) Systems, *Journal of Information Technology* (15:2), 243-244.
- Sprott, D. (2000). Componentizing the enterprise application packages'. *Communications of the ACM*, (43:4), 63-69.
- Tempest, S. and Starkey, K. (2004). The Effects of Liminality on Individual and Organizational Learning, *Organization Studies*, (25: 4), 507-527.
- Turner, V. (1977). *The Ritual Process*, Cornell University Press, Ithaca, New York.
- Turner, V. (1982). *From ritual to theatre: The human seriousness of play*, PAJ Publications, New York.
- Van der Gerben, P., van Beers, C. and Kleinknecht. (2002). A. Success and failure of innovation: A literature review. *International Journal of Innovation Management*, (7: 3), 309-338.
- Van Gennep, A. (1909). *Rites of passage*, Routledge and Kegan Paul, London.
- Walsham, G. (1993). *Interpreting Information Systems in Organization*, Wiley, Chichester.
- Wenger, E. (1998). *Communities of Practice: Learning, meaning and identity*, Cambridge University Press, Cambridge.
- Willcocks, L. P. and Sykes, R. (2000). The role of the CIO and IT function in ERP. *Communications of the ACM*, (43: 4), 32-38.