

ABSORPTIVE CAPACITY: THE ROLE OF COMMUNITIES OF PRACTICE

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by

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Abstract

Using a 'process' based conception of absorptive capacity, this paper reports the findings from an ethnography of organizational learning conducted within the marketing department of the UK's postal provider, Royal Mail. Through vignettes of two contrasting marketing projects undertaken in conjunction with external partners, the results show that interorganizational learning is supported by informal practices enacted through communities of practice. This highlights the relatively neglected role of social and material practices in the generation of absorptive capacity, but also shows that the learning produced by communities is mediated by relations of power among these groups. This paper develops the theory of absorptive capacity by shifting attention away from 'prior knowledge' in supporting learning and turning towards the role of everyday interaction and power relations in producing knowledge in practice.

Keywords: absorptive capacity, communities of practice, organizational learning, ethnography, Royal Mail

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1. Introduction

Corporate performance is often linked to an organization's learning capabilities or 'absorptive capacity' (Cohen and Levinthal 1990). While much of the management literature privileges the role of cognitive mechanisms (notably R&D) in developing absorptive capacity, an emerging strand of theory broadly associated with the work on communities of practice (CoPs) describes learning as a weakly cognitive and socially embedded practice (Wenger 1998; Amin and Cohendet 2004). Despite a resurgence of interest in Cohen and Levinthal's (1990) brief references to the organizational or social aspects of absorptive capacity (Zahra and George 2002; Lane et al. 2006; Todorova and Durisin 2007), the literature on CoPs has had little impact on current theorizations of absorptive capacity. This paper brings together these literatures in order to explore the role of social practices in generating interorganizational absorptive capacity. The analysis draws on ethnographic evidence from a large UK organization (Royal Mail) which illustrates the significance of informal processes for utilizing knowledge formed through interorganizational relationships. However, in contrast to managerialist readings that usually depict CoPs as stable and consensual groups (cf. Contu and Willmott 2003), community-led learning is shown to be a contested process in which 'powered up' groups exert influence over others through the deployment of social and material resources.

The next section reviews the theoretical framework used in the research; then the research methods and organizational setting are described. In the third section, the results are reported through a commentary on two vignettes of contrasting innovation projects examined during the ethnography. In the final section the wider implications for organization theory are discussed.

2. Theoretical Framework

2.1 Approaching Absorptive Capacity

Cohen and Levinthal (1990) use the term 'absorptive capacity' to denote that 'prior related knowledge confers an ability to recognize the value of new information, assimilate it, and apply it to commercial ends' (p.128). Highlighting the path-dependency of learning, this concept suggests that an organization's ability to recognize and utilize external knowledge is a function of its current stock of knowledge (acquired through R&D investment, technical expertise, and production experience). For firms wishing to develop absorptive capacity, Cohen and Levinthal distinguish between the learning mechanisms involved in knowledge acquisition and exploitation. While a firm's ability to acquire knowledge 'will depend on the absorptive capacities of its individual

members' (p.131), its exploitation relies on the firm's structure of communication. With regard to acquisition, specialist 'gatekeepers' detect useful information from the interface with the external environment in a role likely to be occupied by R&D units or more distributed 'receptors'.

To be exploited, however, this information needs to be made available to other parts of the firm. This depends on the capacity of gatekeepers to translate the information into a form understandable by non-specialist units of the organization, a task made easier when the recipients also possess a background of relevant knowledge. To support communication, Cohen and Levinthal highlight the role of a shared language and symbols (p.133), and close links between R&D and other functions, aided by employee rotation and cross-functional teams (pp.134-5). The optimal organizational structure for innovation involves a tension between knowledge overlap and diversity as 'interactions across individuals who each possess diverse and different knowledge structures will augment the organization's capacity for making novel linkages and associations – innovating – beyond what any one individual can achieve' (Cohen and Levinthal 1990: 133). As such, the authors afford a clear role for social interaction in stimulating processes of learning and innovation.

While attaching importance to the interaction of employees with varied training and expertise, Cohen and Levinthal say little about the social mechanisms needed to maintain overlapping yet diverse knowledge structures at the interorganizational level. The authors stress that absorptive capacity cannot be developed through new staff, consultancy services, or corporate acquisitions alone, as making use of the knowledge they possess 'requires an existing internal staff of technologists and scientists who are both competent in their fields and are familiar with the firm's idiosyncratic needs' (p.135). For fruitful interaction among members of different organizations to take place, Cohen and Levinthal inform us that 'such diversity of knowledge structures must coexist to some degree in the same minds' (p.135). Then, with reference to Nelson and Winter's (1982) work on organizational routines, they imply that such flexibility in thinking is difficult to acquire when confronted with organizational boundaries because a firm's competencies are underpinned by tacit knowledge and require direct observation to be learned (Polanyi 1967). The authors then fall back on R&D investment as the best predictor of a firm's ability to exploit external knowledge by enabling the formation of prior, related knowledge (Cohen and Levinthal 1994).

Since the publication of Cohen and Levinthal's work, much of the subsequent research on interorganizational absorptive capacity has also treated the concept as a proxy for 'prior knowledge' (Lane et al. 2006). This leads to a preoccupation with mapping the distance between partnering organizations

(cognitive, organizational, cultural) and evaluating the effect that these differences have on interorganizational learning. For instance, in a study of R&D alliances between pharmaceutical and biotechnology firms, Lane and Lubatkin (1998) found that interorganizational learning was promoted among firms that shared similar characteristics, including overlap of basic knowledge, comparable compensation practices, and shared research communities. While not denying the gains to be made through research on such proxies for 'prior' knowledge, what remains under-theorized is the learning that emerges through the mutual interaction of partnering organizations. This can be captured when absorptive capacity is conceptualized as a capability that emerges through the processes of social interaction.

A growing number of studies adopting a capability or 'process' perspective (Lane et al. 2006; Easterby-Smith et al. 2008) have emerged which draw attention to absorptive capacity as a flow or practice, rather than a possession (e.g. as codified in R&D outputs). This has renewed interest in unpacking Cohen and Levinthal's (1990) brief references to 'communication systems' in facilitating knowledge exploitation, which stand aside their more sustained discussion of prior or possessed knowledge as a function of absorptive capacity. For instance, drawing a distinction between 'potential' and 'realized' absorptive capacity, Zahra and George (2002) claim that 'social integration mechanisms' allow firms to make commercial use of knowledge acquired in different parts of the firm by 'facilitating the sharing and eventual exploitation of knowledge' (p.194). In approaching knowledge exchange, Zahra and George (2002) privilege formal over informal mechanisms, seeing the latter as 'useful for exchanging ideas', but only systematic integration 'facilitates distributing information within the firm as well as gathering interpretations and identifying trends' (p.194).

As such, Zahra and George (2002) treat sociality as a managerial tool for improving the efficiency of knowledge exploitation and therefore only focus on formal integration mechanisms for promoting learning within the firm. Todorova and Durisin (2007) go further in arguing that social processes influence all aspects of absorptive capacity including the ability to recognise and assimilate relevant knowledge external to the firm. They suggest that particular social arrangements are needed for accessing different types of knowledge, with formal integration mechanisms being useful for managing complex knowledge, but weaker ties with external agents support innovation processes by facilitating access to novel information and fresh perspectives. Todorova and Durisin's (2007) work is useful in drawing attention to the critical social processes organizations rely upon to produce learning and innovation at the interfaces with other organizations.

This avenue of research promises to address a gap in Cohen and Levinthal's (1990) model of absorptive capacity by shedding light on the role of social processes in producing interorganizational learning. In Cohen and Levinthal's model, interorganizational learning is treated no differently from organizational learning and, as such, the governance challenge lies in facilitating access to the tacit knowledge that 'sticks' to the routines of partner organizations via socialization or acculturation mechanisms (Nelson and Winter 1982). However, interacting organizations also have to overcome formal organizational boundaries which present obstacles due to potential differences in culture, strategy, and geography (Chaudhuri and Tabrizi 1999). These challenges can be overcome or indeed displaced when partnering organizations share similar characteristics (Lane and Lubatkin 1998), however many interorganizational relationships are formed because organizations want to renew or build new competencies via access to radically different knowledge or skills (Deakin et al. 2009). Such relationships lie outside the purview of management by hierarchy and depend instead on collaborative behaviours that 'cannot be "controlled" by formal systems but require a dense web of interpersonal connections and internal infrastructures that enhance learning' (Kanter 1994: 97). At the interorganizational level, this points towards the importance of informal interaction for facilitating learning at the organizational interface, whether or not this is actually targeted by managerial sponsorship.

The value of informal interaction is underlined by Janowicz-Panjaitan and Noorderhaven's (2008) study of learning within international joint ventures formed by Polish firms. They found that both formal and informal interaction among the 'boundary spanners' of the participating firms supported learning. Notably, while higher reported levels of informal behaviour continued to have a positive effect on learning, they found that 'an excess of formalization can threaten learning' (p.1349). This finding chimes with the literature on situated learning which shows that substantive knowledge and skills can be generated through informal practices in a variety of 'everyday' settings outside or beyond formal institutional structures that are designed to promote learning (Lave 1988).

However, while research on informal 'communities of practice' or CoPs (Lave and Wenger 1991) is gaining in popularity in the management and organization literature (for a review see Amin and Roberts 2008), it has so far had little impact on current theorizations of absorptive capacity. This is surprising given Cohen and Levinthal's relatively unexplored references to the social aspects of absorptive capacity because the CoPs literature provides a social theory of learning of relevance to organizations. In particular, the incorporation of insights from this literature into research on absorptive capacity would further 'process' perspectives by providing a space in which the fine-grained social practices of

knowledge formation among partnering organizations can be studied. This would develop existing theories of absorptive capacity by liberating them from a top-down, managerial view of organizational learning and bring into view the role of both formal and informal mechanisms in developing absorptive capacity.

2.2 Building Absorptive Capacity Through Communities of Practice

To take account of the informal or social interactional aspects of absorptive capacity, this paper applies a CoPs framework to the concept. It is proposed that, along with managerial investment in absorptive capacity, the everyday interaction and common purpose constitutive of an organization's communities will also influence its capacity for learning. The theory of CoPs would suggest that a firm's learning or absorptive capacity is embedded in the activities of its communities, as this is the ontological scale at which individuals make sense of the surrounding environment and engage in interactive processes of knowing and doing (Wenger 1998; Amin and Cohendet 2004). Rather than interpret learning as a process of knowledge transfer (e.g. via pedagogical relations between expert and novice), this theory attributes little value to abstract knowledge (i.e. that can be transferred) and suggests instead that 'knowing' is situated within the social practices of communities (Lave and Wenger 1991). In contrast to Cohen and Levinthal's (1990) emphasis on cognitive change as the basis of learning, the theory of CoPs relates learning to changes in participation in activity – a process driven through interaction with the social and material world. As such, learning is associated with mutual engagement within specific communities which, for newcomers, involves gaining access to 'a wide range of ongoing activity, old-timers, and other members of the community; and to information, resources, and opportunities for participation' (Lave and Wenger 1991: 101). On the one hand, the informal nature of these everyday practices appears to be beyond the reach of strategic management while, on the other, overly prescriptive management may actually serve to inhibit meaningful interaction and improvisation among frontline staff (Brown and Duguid 1991; Thompson 2005).

Since Julian Orr's (1990) seminal study of Xerox's photocopier service technicians that was popularized by Brown and Duguid (1991), subsequent research has revealed more about the application of CoPs in other contexts (including the interorganizational level) and highlighted some of the limitations of the concept (described below). With regard to interorganizational learning, Nooteboom (1999) argues that a joint CoP among partners can help mobilize the tacit knowledge that sticks to the routines established in each organization. Supported by spatial proximity and regular interaction, CoPs can provide a learning context for bridging the social and cognitive 'distance' between the interpretive structures of the partnering firms and thereby facilitate the exchange

of tacit knowledge. For example, Janowicz-Panjaitan and Noorderhaven (2008) found that success in joint ventures was linked just as much to the willingness of partners to share knowledge and engage in informal interaction, as it was to the frequency of formal learning initiatives, such as joint projects, training, and partner visits.

A CoPs framework opens up a space through which the contribution of these informal processes of learning to absorptive capacity can be explored. However, the concept itself is also in need of further critical development. Firstly, CoPs approaches have tended to promote a ‘containerized’ (Lave 2008) view of learning that neglects the import of wider features of the institutional context. In particular, the interdependency of the relations between strategic management and the activities of CoPs remains relatively unexplored (Roberts 2006). To address this, the practices of communities should be examined in relation to formal managerial tools for producing learning (including absorptive capacity which is conventionally understood as a managerial capability), as this will aid evaluation of the relative merit of formal and informal practices for building learning capabilities. As Janowicz-Panjaitan and Noorderhaven’s (2008) research has indicated, an organization’s absorptive capacity is likely to be the product of both formal and informal activities such that neither managerial policy and processes nor informal on-the-ground practices of learning can be studied in isolation. Instead, they should be treated as interdependent processes. However, while Janowicz-Panjaitan and Noorderhaven (2008) choose to survey only the top managers (usually the CEO) of the joint ventures they studied, recognizing their interdependency implies gaining the perspective of both senior management and frontline employees engaged directly in interorganizational relations. This study uses multiple methods to capture both perspectives.

Secondly, while proclaimed as a radical perspective that situates learning in everyday activity, certain strains of CoP theory remain closely wedded to cognitive psychology. For instance, while recognizing that the social environment conditions learning, Nooteboom (1999) still reads knowledge as an ‘entity’ that can be transferred from one context to another if the appropriate cognitive ‘bridging’ mechanisms are in place. However, comparing the interpretive schemes of individuals – and assessing their cognitive proximity or distance – will only establish the antecedent conditions for interaction but reveal nothing about how the participants subsequently ‘go on’ together (Wittgenstein 1958). As Shotter (1997) insists, at the moment ‘when a second human being responds to the acts of a first’ (p.349), their encounter becomes a ‘dialogical’ practice that cannot be attributed to the prior knowledge, intentions, or plans of any one of the participants involved.

The concept of ‘joint action’ (Shotter 1993) allows us to look beyond the distribution of existing knowledge (inside/outside cognitive schemes) and towards the immanent production of knowledge in acts of social interaction. Akin to improvisation in jazz performance (see Hatch 2002), the ‘give and take’ of social interaction creates ‘empty spaces’ for the exchange of ideas and acts of creativity based on sensual, rather than cognitive, engagement. Approaching social interaction as joint action suggests the following: first, interacting partners (e.g. boundary spanners) do draw on ‘prior’ knowledge, but also sociality as a locus of creativity; second, CoPs are not merely a source of existing competencies, but also a spur for knowledge formation; third, absorptive capacity is not only a stock of knowledge, but also a practice or flow embedded in processes of social interaction; fourth, as a practice, absorptive capacity cannot be reduced to managerial strategies or intentions, but is enacted through activity within and beyond formal knowledge contexts (including both R&D and frontline operations).

Finally, CoPs approaches have tended to skirt around the inflection of power in social interaction, despite Lave and Wenger’s (1991) early acknowledgement that ‘unequal relations of power must be included more systematically in our analysis’ (p. 42). This could stem from a ‘managerialist agenda’ that reads CoPs as consensual groups eager to learn and contribute to corporate objectives (see Contu and Willmott 2003). Lacking an adequate theorization of power, CoPs have neglected the ‘forceful’ processes through which change and innovation are negotiated within and between communities (Fox 2000). In keeping with others (Fox 2000; Swan et al. 2002; Amin and Cohendet 2004), I believe that actor-network theory is of relevance to CoPs – that is, as a method for describing innovation as the product of actors (both human and non-human) attempting to align contested practices towards new ends.

Attentiveness to informal sources of power will help to qualify the effect of informal behaviour on interorganizational relationships. Other evidence suggests, however, that joint enterprise can create boundaries between the practices of different communities. In the UK healthcare sector, for example, Ferlie et al. (2005) highlight the significance of social and cognitive boundaries between professional communities (such as doctors within primary or acute care) for inhibiting the diffusion of medical innovations, as such groups ‘develop internal learning and change but block externally oriented sources of change and learning: they are self-sealing groupings’ (p.131). At an interorganizational level, the successful operation of a joint CoP between partnering firms might develop an organization’s ‘outward’ absorptive capacity, but also undermine an ‘inward’ capacity by creating new boundaries between co-workers within the same organization (Cohen and Levinthal 1990). The role of ‘power relationships’ has also been neglected in constructs of absorptive

capacity, prompting a call for organizational sources of power, such as unequal access to internal resources, to be given further consideration as an effect on the exploitation of new knowledge (Todorova and Durisin 2007). The negotiation of interaction across internal and external organizational boundaries through the interplay of formal and informal manifestations of power is essential for furthering understanding of absorptive capacity as an organizational process or capability.

Taking into account these themes (innovation and power as manifest in interaction) implies adopting a process-based approach to examine the generation of absorptive capacity, with a focus on the interactions through which agents engage in interorganizational learning. The activities of CoPs are read as a potential source of absorptive capacity and evaluated in relation to formal organizational learning mechanisms put in place by managers to derive benefits from interorganizational relationships. The context for the study is a large UK postal organization, Royal Mail, that developed partnerships with external organizations as a strategy for innovation in the mid-2000s.

3. Methods

3.1 Research Approach

This study evaluates empirically the role of absorptive capacity play in interorganizational learning, guided by the following questions: (1) How do managerial mechanisms add to a firm's absorptive capacity? (2) What role do informal mechanisms such as CoPs play in success? (3) What impact do power relations have on learning?

In a review of empirical studies on CoPs, Lorenz and Barlatier (2007) identified four different research techniques employed in these studies – ethnography, interviews, statistical analysis of survey data, and computational modelling. They suggested that ethnography was the most appropriate method for capturing localized processes of learning by enabling close observation of face-to-face communication, as mediated through shared (often unarticulated) understandings and the use of material artifacts. For example, Julian Orr's ethnography of photocopier servicing, which revealed the importance of technicians' 'war stories' for diagnosing unusual problems, was successful because Orr accompanied the technicians to both formal and informal settings, gaining an insider's view of the community. While not generating the same contextually-rich data, interview techniques can compliment ethnography by allowing the observations made to be qualified through discussion with the participants, as well as affording direct inquiry into the impact that wider

institutional arrangements have on processes of knowledge formation (Lorenz and Barlatier 2007).

This study concurs with a multiple method approach, combining ethnographic techniques with supplementary interview data to gain access to both on-the-ground and managerial perspectives on learning. As such, a nine-month research placement was organized with Royal Mail's marketing department in central London between January and October 2004. Tracing the role of informal mechanisms of learning implied securing a working role with an organizational group (i.e. a functional or project team), allowing the ethnographer to follow their everyday movements, transcribe fly-on-the-wall discussions, and participate in team meetings, creative sessions, and other formal and informal contexts for learning. In other words, such an approach would afford access to 'a variety of unguarded behaviour' (Latour and Woolgar 1986: 153). In addition to this, working within a large hierarchical organization would allow an assessment of formal managerial mechanisms – notably alliance strategy and R&D – through interviews with senior managers, consultation of documentary evidence, and witnessing the on-the-ground capacity for learning that they promote.

3.2 Research Setting

Owned by the UK government, Royal Mail provides a universal postal service to the UK's 29 million addresses; employing 159,000 staff and generating an annual turnover of £9.5 billion (Royal Mail Holdings plc 2012). A decade ago, the UK government revealed that Royal Mail would be transformed into a public limited company (but remain owned by the government) and that competition would be introduced across all postal services (Economist 1999). During its first year as a plc, 2001-2002, Royal Mail made a record loss of £1.1 billion. In response to the losses, the managerial board took on a more commercial orientation and the company embarked on a period of 'restructuring for recovery'. From 2003 to 2006, the postal market underwent a process of competitive liberalization as licences were granted to new providers and Royal Mail lost its 370 year monopoly on postal provision. The company responded to competition by initiating a restructuring programme to reduce costs (involving the redundancy of 30,000 staff) and investing in the development of new mail-related capabilities to sustain the loyalty of existing business customers. These consisted in vertically integrated activities along the 'value chain' of mail, including data and media services, print and production, and customer response management capabilities, that took place prior or subsequent to the organization's core competence in postal collection and delivery. In July 2013, the UK government announced the proposed floatation of Royal Mail through an initial public offering on the London stock exchange. The findings presented

here represent examples of Royal Mail's response to the preceding step of the liberalisation of the postal market in the early 2000s.

The marketing department was charged with developing these new capabilities, often in partnership with external organizations such as specialist creative agencies. As senior managers aimed to expand the domain of competencies possessed by Royal Mail, the purpose of working with external partners was to acquire new knowledge and skills that were not currently available in-house. As such, access to the marketing department provided an opportunity to observe Royal Mail's attempt to innovate through the exploitation of external knowledge and expertise. This strategy is described through vignettes based on events from two contrasting marketing projects, both of which were undertaken in conjunction with external creative agencies. Using the concept of absorptive capacity, the divergent outcomes of the projects are tied to the capabilities of the in-house teams involved to exploit the knowledge possessed by the 'innovative partner'.

The first project was the development of an advertizing service that enabled small organizations to create direct-mail campaigns online. A creative agency was involved to provide technical expertise, including knowledge of small and medium enterprises (SMEs) and website development skills. The project involved one employee from Royal Mail (the product manager). In order to become immersed in the typical working role of a marketer, I asked the product manager to treat me as if I were a new graduate just beginning work at the company. This approach proved effective, as I was able to engage in project meetings, undertake pieces of project work, and interview employees within Royal Mail and at the creative agency with an 'insider' view of the product and its management. The observations were supplemented with two semi-structured interviews with the product manager (at the start and end of the research) and one interview with the account handler from the creative agency. Although this project provided a useful insight into the collaboration of the marketing department and a creative agency, the tempo of activities was not sufficient to fill all of my time so there were days when I was struggling to engage in any research activities per se. Through the use of personal contacts made while working in the department though, I was able to secure involvement in an additional marketing project.

This second project was organized to redesign the customer services section of Royal Mail's website. With the introduction of competition across all postal services, this project was part of a portfolio of work aiming to improve the reputation of Royal Mail by upgrading the brand interface. Although the project's aim was not markedly innovative, it is presented as an example of novelty because it was administered using a new method of project

management. A creative agency was employed to provide specialist knowledge, including expertise in creative design and project management support. As this project also involved an external organization, the social practices of this team could be compared and contrasted with those examined through the first project. This project exhibited a contrasting logic of interaction, affording an exploration of the role of informal enterprise and repeated interaction in the generation of absorptive capacity. Semi-structured interviews were also carried out with two members of the project team from Royal Mail (both of whom were interviewed twice) and with the strategy director from the external creative agency.

In this additional project, I was more of an observer than a participant. I tried to find a working role to legitimize my inclusion in the project team but, in practice, my lack of practical marketing knowledge rendered making a recognized contribution difficult. Furthermore, when observing meetings and interactions I was not always able to understand the explicit utterances, for example jargon and acronyms, or shared understandings that were left unsaid by members of the firm. Through social learning, asking questions and engaging in dialogue, I was able to overcome some of the ‘cognitive distance’ caused by the lack of shared *habitus* (Bourdieu 1990).

The project data were supplemented through semi-structured interviews with a small group of senior managers within the marketing function to gain their views on the overall learning and innovation policies being pursued by the organization, including the restructuring programme and the use of interfirm relationships. Acquiring a ‘managerial’ perspective through these interviews supported the construction of links between the micro case-studies described and the institutional and policy context of the organization, aiding the generalization of the findings from a micro to organizational level. All of the interviews conducted during the ethnography were audio-taped and transcribed. The number and content of questions varied from interview to interview. On occasion, I would send a draft set of questions to the interviewee in advance of the interview. However, much to the annoyance of those who had prepared answers to my questions, I would very rarely stick to the interview schedule, preferring instead to have a dialogical exchange in which I would respond to what the interviewee had just said rather than refer to the next one in a pre-determined set of questions.

3.3 Data Analysis

While ethnography is an established choice of method for examining the fine-grained practices of organizational learning (e.g. Law 1994; Orr 1996; Wenger 1998; Knorr Cetina 1999; Weeks 2004; Thompson 2005), the precise techniques through which this method produces evidence often remain vague and opaque.

The following quotation from an ethnography textbook, which attempts to describe the conduct of ethnographic research, is typical: '[ethnography] involves the ethnographer participating, overtly or covertly, in people's daily lives for an extended period of time, watching what happens, listening to what is said, asking questions – in fact, collecting whatever data are available to throw light on the issues that are the focus of the research' (Hammersley and Atkinson 1995: 1). The opacity of ethnography appears to reflect an inherent tension between practice and representation. While ethnography was chosen because it appeared to be in line with the principle of learning through engagement (Lave and Wenger 1991), the difficulty lies in translating the experiences thereby 'acquired' into evidence that can be used to evaluate formal propositions and concepts and add to or develop organization theory. As Langley (1999: 691) remarks, 'Process data are messy'.

The modes of participation in the projects described above were used to collect data that could be used to construct detailed stories of the trajectories of the projects. A field diary was kept in which every observation, interaction, project meeting, and email circulated was recorded and catalogued. For example, when a project meeting was attended, not only were the parties involved, the type of room, the purpose of the meeting, the circulation of documents, the construction of new artifacts, and the dialogue and main outputs recorded, but other 'moments', that often struck me as a *feeling* that something had changed or a *hunch* that something novel might be at work, were noted down hastily among the other inscriptions for later analysis, embellishment, or qualification (through discussion with one of the participants, for instance). These practical insights acted as resources for more sustained reflection about emerging ideas, developing themes, and the validity of the research questions that stimulated the empirical research.

The analysis of the data involved a 'narrative strategy' in which contextual details of the projects were arranged into 'stories about what happened and who did what when – that is, events, activities, and choices ordered over time' (Langley 1999: 692). However, the actual 'events' described were not overtly 'naturalistic' but geared towards specific theoretical concerns, with the processes of absorptive capacity the predominant 'anchor point' (Langley 1999). As such, the original research questions oriented the analysis process by aiding the filtering and interpretation of the data as the narratives were compiled. The inclusion of two case studies (one deemed more successful and one less) allowed comparisons to be drawn across the cases thereby facilitating a synthetic analysis of the processes – managerial, informal, power-related – that influenced the degree of absorptive capacity in the organizational projects. Although the qualitative and inductive nature of the research is not appropriate for testing the significance of hypotheses, it does afford an empirical grounding

of theoretical constructs, adding insight into the application of existing theory and generating evidence that opens up new theoretical directions. In the following section of this paper the stories of the contrasting marketing projects are told. Following each vignette, a commentary on the project's effectiveness is presented using the construct of absorptive capacity.

4. Project Case Studies

4.1 Developing a New Advertizing Product

Having secured research access to Royal Mail after a three-month delay (this was due to industrial action across a number of operational units in the autumn of 2003), I arrived at the marketing office (Media House) in London for 9am on my first day. I reported to a senior manager within the one of the five marketing teams (whom I had met during the previous week to discuss the nature of the research I wanted to do), and he allocated to me the desk opposite to the one where he worked. There were just a few feet of desk space and a couple of piles of paper and books between us. This was the intimate ontology of an open-plan office: a daunting space for a research student used to working in relative isolation. However, there were benefits arising from this lack of privacy and partitioning. From where I was sitting I was able to observe activities and conventions across the entire office, from the entrance immediately to my left to the comings and goings at the coffee machine in the far right-hand corner.

After a week of working within the marketing office, I am meeting the product manager I will be working with as part of my role as a marketer. Over the past six months, 'Mark' (a pseudonym) has been managing a product called *Web DM*, a new website that allows visitors to create direct-mail campaigns online. The product was developed to encourage SMEs to use a greater proportion of direct mail relative to other advertizing channels in the 'media mix'. A former manager informed me that the product had been developed in response to a number of queries from SMEs, who had assumed that Royal Mail could create direct mail campaigns for them and were requesting quotes for producing a campaign. A product specification was drawn up and the task of constructing the product's website was put to tender. Three responses were received and a London-based creative agency, 'Create', was selected to develop and manage the website.

Although the website attracted hundreds of visitors after launch, the conversion rate was very low. The project team suggested two reasons for this: a lack of advertizing promotion at launch as this coincided with a restructuring exercise and the original development team switched roles; and insufficient market

research on SMEs to ensure the product specification met the needs of the target market.

A new piece of market research is undertaken to address the lack of insight into the needs of the SME market. An external research company is commissioned to evaluate the usability of the website; twenty SMEs participate in computer-based tests. The report highlights key areas of the website that need to be redeveloped to make the product more appealing to SMEs. The agency also receives the findings and, on the basis of their interpretation of the results, issues a second creative brief for redeveloping the website.

I join the project team after the majority of the changes have been implemented by the agency. My first task is to manage an additional set of design changes recommended by the research. These are agreed at the first face-to-face meeting I attend between Royal Mail and the agency.

Following the meeting, the product manager asks me to liaise with the agency to progress the changes. I do this by telephoning the agency to find out the length of time and cost for making each change, and then exchange emails with the product manager to inform him of progress. I soon realize that managing the product is characterized, for the most part, by the maintenance of telephone and email mediated relations. I use telephone and email as the predominant mode of communication with other individuals within Royal Mail and with the creative agency who host the *Web DM* site.

Technical development of the website begins at the agency and, after a week, they let me know that the design changes are awaiting my approval on a 'dev-site'. Guided by the descriptions of the changes in the email from the agency, I cross-reference the changes to the new site with the appearance of the current 'live' site. I email the agency to agree all of the changes, other than suggesting that the color of a hyperlink should be changed to increase its prominence on the screen. The agency replies saying that the necessary 'amend' will be made and, with the product manager's agreement, the new site goes live the following week.

A further round of advertizing activity is then undertaken, involving the placement of 'popup' internet banners on websites frequently used by SMEs. However, despite both the design changes and advertizing, the website fails to achieve sales targets during the five remaining months of the ethnography.

4.2 The Failure of *Web DM*: A Commentary

As the vignette illustrated, Royal Mail managed the development of new products and services by drawing on the knowledge capabilities of partner organizations. This system of organising work was the product of a managerial policy that sought to extend the breadth of competencies available to the department through the incorporation of external expertise. As a senior manager stated in interview, the aim was to secure innovation through these relationships rather than attempt to develop new capabilities in-house:

Often we want to work with these partners because they are extremely different to us, and if they can bring a technical capability, which we can secure to our satisfaction through a partnership agreement or an alliance or something, I see it as almost counter-productive [to develop capability in-house].

Royal Mail decided to work with organizations that were ‘extremely different to us’ because the competencies required to secure competitive advantage in a liberalized market context were not deemed to be wholly available in-house. There was a gap between the stock of knowledge that was currently available within Royal Mail and the bundle of skills, routines, and products that was perceived to be necessary to establish a new set of capabilities. As such, once a strategic need for innovation had been identified, this would be met through the creation of relationships with ‘the innovators’ of partner organizations. While partnership agreements were arranged to access the knowledge possessed within a series of leading organizations, expenditure on internal marketing personnel was reduced through a succession of restructuring exercises. Underpinned by this dynamic, the process of innovation would become increasingly displaced to, and mediated by, the creative agents within external organizations.

As an innovative new product, the development of *Web DM* reflected this approach to innovation. In the mode of management employed by Royal Mail, there was a marked division between the managerial capabilities used to access the knowledge assets tied to external agencies, and the accumulation of everyday pragmatic exposure to the creative processes in which those assets were practiced. Royal Mail and the creative agency worked together, yet engaged only rarely in *joint work*. As Royal Mail marketers were not engaged directly in the creative process, the alignment of practices could be accomplished through the affordances of ICTs. The only time when the group did meet face-to-face was for monthly product status meetings. These meetings tended to be organized around specific periods of activity, such as market research or advertizing campaigns. In each meeting, spreadsheet charts depicting customer visits to the website were presented by the agency but the ensuing

discussion only related trends in usage to the efficacy of advertizing campaigns or design changes to the website. The assembled group did not have a sustained debate about the design of the website or negotiate differing interpretations of the reasons for the product's low sales volume. The absence of mutual engagement affected the team's ability to adapt the product to improve its sales performance.

The marketing agency selected to develop *Web DM* possessed a quite different repertoire of skills from that available within Royal Mail. The CEO of this organization was the founder of another creative agency that Nigel Thrift (2005) described as 'the chief exemplar of the creative company' (p.143). This agency was employed to work on the development of the website because of the inimitable domains of knowledge, both technical and cultural, that the organization could bring to the project. Royal Mail's decision to use creative agencies can be read as an attempt to generate novelty through the exploitation of 'cognitive distance' (Nooteboom 1999): a qualitative difference among the interpretive schemes of the members of the marketing agency and those prevalent within Royal Mail. However, to facilitate creative interaction within a project group that possesses a range of cognitive structures, some sort of intervention mechanism should be required to mobilize the tacit knowledge that sticks to the routines of the 'innovative partner'.

During the time that I worked within the *Web DM* team, no such mechanisms appeared to be in place. The spatial intermediation of the practices of the two organizations did nothing to help bridge the social and cognitive distance between their respective sets of knowledge. Nevertheless, even when the client and agency did come together for face-to-face meetings, both acted within the parameters of a rigid division of roles. This stifled learning because of the lack of engagement of the group with a common set of problems or tasks. Royal Mail did not get involved in website development by the agency, while the agency would not be drawn on Royal Mail's methods for achieving sales revenue. While the client and agency may have held competing perspectives on the way in which the development of *Web DM* was being managed (due to differing cognitive schemes), the contractual arrangement of the relationship between the two organizations precluded an exploration of these views.

The contract with the agency was negotiated on the understanding that the knowledge embodied in *Web DM* could be absorbed readily by Royal Mail. Organized around this artifact, different functions of the strategic architecture of Royal Mail were coordinated to produce sales revenue. For example, the product manager was expected to evaluate the performance of the product by commissioning market research. This process is then managed by the dedicated market research team within Royal Mail. The market research team briefs

external market research agencies to carry out specific pieces of research. Rather than acting as a pragmatic creative agent, Royal Mail managed its internal and external interfaces in accordance with the belief that creativity was procurable through formal transactional relationships.

Assuming that this method for utilizing a distributed system of knowledge is successful (Hayek 1945), innovation can be cultivated in a vast array of domains and in the absence of significant investments in the internal absorptive or learning capacity of the firm (beyond partner selection and monitoring practices). However, this approach to innovation faces four major drawbacks. First, given that the successful generation of innovation is often a tumultuous process (Latour and Woolgar 1986; Akrich et al. 2002), any attempt to secure novelty through a transactional relationship is likely to be problematic. For example, in the case of *Web DM*, the initial lack of sales revenue meant that the product had to go through a further cycle of development that had not been foreseen. As only the agency possessed the technical knowledge to develop the website, Royal Mail remained engaged in a costly relationship that should only have involved the exchange of a technical artifact. As no mechanisms were in place to reduce the level of dependence on the partner organization, notably those which would allow Royal Mail to learn some of the skills practiced by the agency, navigating the lengthy process of product development through a consultative arrangement became an expensive and relatively inflexible approach to innovation.

Second, the reliance on external agencies fashioned a relationship of creative dependency. While economizing on resources and facilitating access to a wider range of capabilities, a decentred system of knowledge management creates a 'hollowed out' (Storey 2002) structure of learning practices. For example, the strategic architecture of the marketing department dictated that the majority of pieces of market research are coordinated by a separate market research team within the department, who draw up briefs for marketing agencies who then undertake the research themselves. This meant that the marketer who commissioned the research, along with any other stakeholders, did not interact with 'the market' directly but experienced it in codified form in research reports or, more commonly, as an audience member in the delivery of PowerPoint presentations by marketing agencies. Hence, marketers were not routinely involved in 'sensemaking' themselves (Weick 1995); what they learn is how to make sense of the market as depicted in the reports and presentations of the 'sense-makers' of the market research agencies. Thus, the employment of marketing agencies conferred market knowledge on external organizations and created a relationship of dependency in which it is the agencies who speak for the market. Rather than being led by the marketing department, the production of new knowledge was mediated by the creative practices manifest within these

organizations. In the absence of an internal absorptive capacity, Royal Mail had to trust the desire and wherewithal of external agencies to generate innovation.

Third, a corollary of relying on the external production of creativity is the neglect of internal ‘people-embodied skills’ (Prahalad and Hamel 1990: 84). While the engagement of partners appeared to be a key strategic focus, the training and development of Royal Mail marketers tended to be overlooked. During the time that I was working at Media House there was little evidence of an active training and development programme being in place. Towards the end of the ethnography, Mark left Royal Mail to work for another large organization. The lack of investment in the development of the skills of managers was a source of frustration, as he stated in interview:

Training and development is totally invisible at the moment and this is one of the main reasons why I am leaving. I think there is an absence of any guidance at line manager level in terms of what’s available, how to get hold of it, and I think if you did a straw poll around the office and said when was the last time you actually did some personal development, because it doesn’t have to be a course or a seminar, it could just be work shadowing someone, they would struggle to come up with something in the last year, and that’s quite frustrating for people that aren’t new starters, that aren’t senior management, and are the majority of people in this business.

Other than acquiring the competence to administer ‘the innovators’ through on-the-job experience in successive managerial roles, the ‘hollowed out’ organizational structure did not seem to support the emergence of in-house expertise or recognize the value of creative skills among middle managers. The turnover of personnel, due to dissatisfaction among internal managers and successive restructuring exercises, did affect the management of products, including *Web DM*. Shortly before he left Royal Mail, Mark reflected on the consequences of the changes in product management over the two-year life of the *Web DM* project:

From a project management perspective, there’s been several changes from Royal Mail’s perspective and, actually, the agency, although one of the original representatives is still involved. So, the expertise and the background learning, while some was passed over, you never are going to get everything and, as you know, I am moving on and actually passing over to someone else so it has suffered from a lack of resource continuity. So in some respects you go over the same ground more than once because you don’t know any different.

While it could be argued that the ‘possessed’ knowledge accumulated by the outgoing product manager, such as product documentation, legal contracts, market research presentations, lists of project contacts, and a varying amount of tacit know-how, is imparted in ‘baton-passing’ meetings between changing managers, the knowledge practiced in managing the product – the terms of interaction, common sense of where the product is in its development, future possibilities, challenges, and passion – is embodied in the everyday knowledge routines which align Royal Mail and other agencies. It is due to a breakdown in the practice of these routines that the ‘background learning’, as Mark referred to it, is lost and the project loses momentum while new knowledge routines, which depend on the brokering of new relationships, are established. Furthermore, owing to the changes in roles caused by the restructuring exercises, there was a lack of ongoing inter-generational contact between past managers of the product and current ones. This meant that learning was not encouraged across generations, which can generate new insights through the negotiation of new and established perspectives (Wenger 1998).

Finally, the evidence suggests that the scarcity of investment in an internal absorptive capacity is antithetical to the formation of CoPs. In relation to the *Web DM* project, the setting-up of an arm’s length relationship with an *external* agency and the denudation of the creative skills of *internal* managers did not promote joint work. The nature of the contractual relationship between Royal Mail and the marketing agency meant that the fees that the agency received did not vary with respect to the sales revenue generated by the product. The agency did not, therefore, share the same innovation imperative as Royal Mail when the product failed to achieve sales targets. This anomaly deterred mutual engagement in informal communitarian practices that should, perhaps, have been aimed at changing the product rapidly in the hope of turning it into a success. Significantly, the contractual distribution of competencies meant that the burden of improving the sales performance fell on Royal Mail.

The failings of *Web DM* can be attributed to the lack of investment in the absorptive capacity of Royal Mail. As few managerial mechanisms for cultivating the learning capability of the marketing department were discovered, it seems plausible to attribute the trajectory of *Web DM* to a lack of: opportunities for learning (to bridge the cognitive distance between client and agency); investment in human capital (to build durable and creative internal marketing teams); and common innovation objectives (to encourage mutual engagement among Royal Mail and partner organizations). While the absorptive capacity of the marketing department could have been developed using the formal mechanisms noted above, the capacity to learn may otherwise be established through the fostering of an informal knowledge infrastructure. An

illustration of the affordances of this infrastructure, as manifested in the logic of interaction of a contrasting market project, is presented in the next vignette.

4.3 Embedding A New Project Management Process

‘Chris’ opens the meeting room door; we follow him through. There are eight suited Royal Mail employees sitting around an oval meeting table. Apologetically, we pull up three seats at the far end of the table. Once this interruption has been negotiated, the technologist (‘Alex’) is able to continue with his PowerPoint presentation. This describes a series of company websites which, Alex argues, are examples of ‘good’ design when compared to Royal Mail’s website. The website is being examined because Customer Services has a backlog of telephone and email enquiries from customers that could be serviced more efficiently through the website. Having outlined the problem, Alex describes the approach necessary to resolve it. The website shall be modified by the technology function and the changes updated on a ‘dev-site’ each week. The project team would use teleconferences to sign off the design changes. This approach would allow ‘quick wins’ to be made that reduce the level of customer contact with Customer Services.

One key decision remains: where will the capital needed to fund the project come from? Together with Customer Services, Chris confirmed that the marketing department would be providing the funding. But, he wants further information: what does it currently cost to service customer queries when compared with making the proposed changes? This information was needed to build a ‘business case’ to secure funding from the senior marketers. ‘James’, the member of the creative agency who accompanied us to the meeting, adds that the requirements of Customer Services should ‘drive everything’ and need ‘fleshing out’ before the project can progress. The meeting closes with agreement that a further ‘requirements workshop’ is needed.

The discussion between technology and marketing continues in the staff canteen – over a Coke. Alex is concerned that time will be wasted going through these various stages when ‘quick wins’ that would save the business money could be implemented very quickly. James, who is more vocal in this setting, shows consideration for Alex’s desire to act quickly, assuring him that the stress will be on ‘speed, but not running off too quickly’.

The next meeting takes place a week later. Once again, James and Chris are present, along with Alex. This time, Alex is accompanied by a project manager from the technology function. Along with discussing the ‘requirements workshop’, James and Chris want to discuss the project’s general management.

James circulates an A3 sheet of paper depicting a ‘document tree process’ and the group is taken through the proposed project management process.

CHRIS: [*running his finger across the document*] There are five stage gates. First you have initiation, which sets the strategy or imperative for undertaking the project.

JAMES: [*looks up from the document to address Alex directly*] This leads to the next stage of prioritizing the business requirements. This is critical in order to make sure you are satisfying the business need. This needs to be more specific than... in three weeks Customer Services want reduced telephone and email volumes...

ALEX: [*interrupting*] What about quick wins? It’s costing us money. There are things we can do in days. I have no issue with the mechanics but Customer Services won’t wait another month!

‘Keith’, the newly appointed project manager, tries to intervene.

KEITH: [*looking from Alex to Chris*] I can see two different approaches here. It is going to be crucial how we work together.

CHRIS: We will have 80% of James’s time. We are bringing them into the team so you don’t need to worry about niceties.

KEITH: [*looking towards Chris*] Within Royal Mail, the main customer is you?

CHRIS: [*nodding*] If the Royal Mail brand is not working then I am in trouble.

KEITH: Ok, Chris is master.

Within an hour of the meeting finishing, James emails the project manager some sample documents relating to the project management process. The next day James emails Alex a long list of questions regarding contact with Royal Mail’s customers for circulation among the group attending the second workshop as preparatory ‘homework’.

The same participants that attended the first *Help Online* workshop are sitting in the boardroom at Create’s offices. This time the seats are leather-trimmed rather than cloth-covered. There are two pots of fresh coffee on one of the sideboards and an inviting plate of biscuits. James stands up to introduce the first item on the agenda: the requirements brainstorm.

JAMES: There are four flipcharts and pens available for giving us your feedback. If there was no customer services section on the website, what would you like? The output should be a list of changes to the Royal Mail website.

After this guidance, the group rise from their seats, split up into small groups, and gather around the four flipcharts. Ideas are scribbled onto Post-it notes and attached to the flipcharts. One member of each group is invited to read out the

ideas attached to their group's flipchart. Next, every member of the assembled group is instructed to 'vote' for the best ideas on each flipchart by 'ticking' four of the Post-it notes. Those with the most ticks are transferred to a clean flipchart sheet and together the group classify the ideas as 'high', 'medium', or 'low' priority.

It's late afternoon. The project manager thanks the group for attending and says he will document the 'scribbled feedback' on the Post-its and circulate a documented set of business requirements to the group in the next few days.

James and Chris facilitate further face-to-face meetings with the individuals present at the second workshop to gather more information about the business requirements. As prototypical design changes are made to the website, further meetings are held to check that the changes meet the business requirements of the stakeholders and, if not, they are refined and reviewed again. Feedback indicates that early changes made to the website are reducing the queries raised with Customer Services. Chris shares these positive results with the marketing executive committee when he delivers a presentation to them on the digital strategy. At the end of the presentation, the chair of the committee agrees that further resources to support digital projects would be sought.

4.4 The Success of *Help Online*: A Commentary

Similar to *Web DM*, the *Help Online* project illustrates the use of external knowledge and expertise as an approach to innovation. However, the practices and outcomes associated with this project were markedly different. I will argue that the success of this project should be linked to the generation of absorptive capacity through informal mechanisms, namely repeated interaction and the contagion of a specific logic of project management.

While the management of *Web DM* was characterized by an absence of joint work, the development of *Help Online* was heavily influenced by the close collaboration of a manager within Royal Mail's digital team and a strategy director from the creative agency. The outcome of this alliance was an innovative method of managing marketing projects. The digital team had developed a way of working that diverged from the 'official' procedures depicted in Marketing's business processes. When I first met Chris, on the day of the initial *Help Online* workshop, he described the new project management technique. The joint creation of the digital team and Create, this was a novel method for delivering technical projects in an emerging 'digital space':

Royal Mail has a process for everything. Previously, the way of delivering projects was to work through Technology, whereby they

provided the technical elements and we provided the commercial input, you know, we gave them a project brief. We needed to find a new process because there wasn't a process in place for delivering projects in the digital space where many different parties needed to be involved. The business is pretty relaxed about it; I mean it's not that savvy, it wouldn't have recognition of it.

In order to bring together these different parties, a cross-functional structure was created. Chris sketched this out on his notepad during our initial meeting and it was also represented on one of the slides of the PowerPoint presentation that he later made to the marketing executive committee (Figure 1).

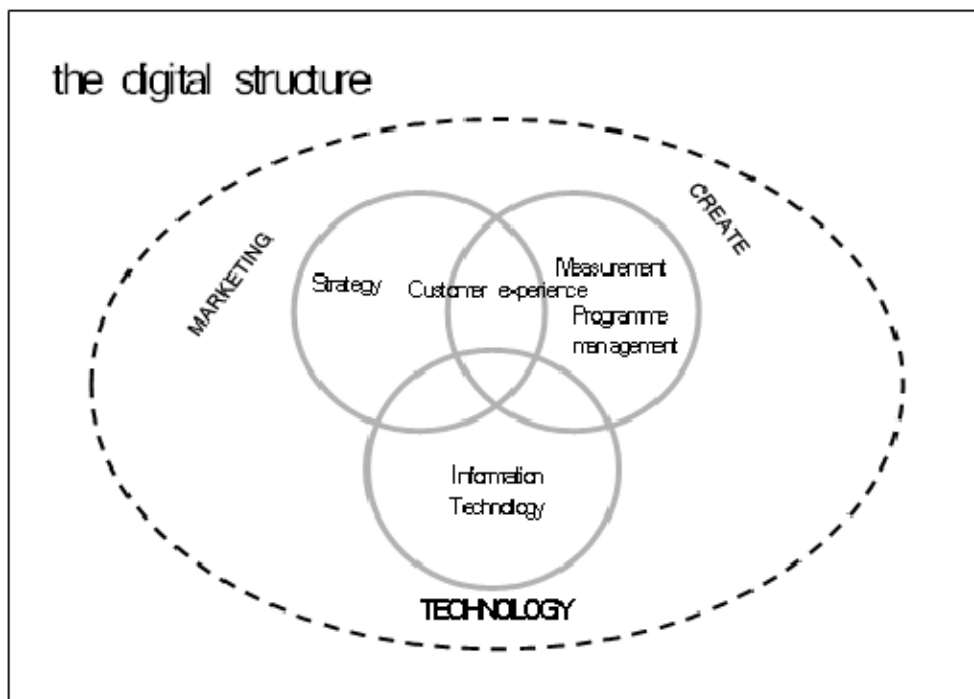


Figure 1. The hub structure for delivering digital projects

The structure specified the role of each represented function. The experience of customers was identified as a common domain of interest. The creative agency was engaged to forge the concept with the specific organizational requirements of Royal Mail, and thereby fashion a new way of working across the digital space.

Having developed the hub structure, James and Chris worked in partnership to develop a process for managing digital projects. The five-staged project delivery process (passing through initiation, requirements analysis, design, specification, and build stages) that they constructed was based on *Prince2* principles (a stage-gate project management method). This was the project management method

that employees at Create are taught to use for managing client projects in their formal training and was an integral part of the agency's way of working. A willingness to follow this approach, if not the nuances of the technique itself, became apparent in the practices of the team prior to the disclosure of the 'digital space'. Awareness of the process among employees emerged through interaction with Create representatives in the delivery of marketing projects in the year before the restructuring of the department.

The desire to learn from the practices of the agency was propelled by the perception that the employees within agencies possessed a strong work ethic and were 'experts' in their fields. A recent graduate who joined the digital team, 'Ben', saw Create's style of working – understood as being driven by the requirements of a client – as progressive when compared to the practices of Royal Mail's marketing teams in general:

The reason I see we employ agencies is because they are experts. Ideally Royal Mail would be full of those people but I think agencies headhunt the best and offer them very lucrative salaries because they're obviously in demand. What you are assured of by using an agency is, you know when you purchase their services, you will be getting top-class marketers.

Although Create had traditionally been employed on a project-by-project basis by Royal Mail, the shift to a 'retainer' contract following the restructuring facilitated the development of a more durable relationship. This meant that members of the digital team and the agency were able to interact on an everyday basis through joint involvement in ongoing projects. James was regularly at Media House, either working in the touchdown area or engaged in formal or informal project meetings. Two desks at Create's offices were also made available to the digital team for use before or after the many project meetings held at the agency. This system of organization meant that members of the team were able to observe, and participate in, the practices of a creative agency.

Thus, the digital team were able to exploit the knowledge immanent in the practices of an external creative agency, Create, because the two groups were involved in an integrated and sustained working relationship. This relationship developed the absorptive capacity of the digital team via two social mechanisms of learning. First, the client and agency were engaged in a mutual domain of activities: designing the hub structure and project management processes for the digital space; engaging in extended debates to influence the management of digital projects; and facilitating project-related activities such as the *Help Online* brainstorming workshop and reviews of customer requirements. By participating in such activities, members of the digital team were able to develop a sense of

what constitutes competent engagement by comporting with the skilful performances of the agency's employees. As Ben stated during interview, witnessing the way in which a talented member of the agency conducted everyday work activities was a source of learning and inspiration:

I would watch him at a meeting and he was fantastic. He would facilitate everything; he had great ideas but he didn't always impose them. He always threw everything at people and got people to think and talk. That is something I am trying to learn from. I had to chair a meeting the other day for the first time and I tried to facilitate it in the same manner so I prepared flipcharts so there was a staged way to the meeting and that was a really good learning experience.

Second, the digital team's capability to learn was facilitated by a material infrastructure visible in the practices of the agency. As stated earlier, the method by which Create manages projects was underpinned by *Prince2* principles. Embedded in the practices of Create, this methodology represented a common 'procedural authority' (Cowan et al. 2000) that orients the knowledge routines of staff as they worked on client projects. As each project passed through the same predetermined stages, a client working regularly with the same agency would almost certainly notice that the process by which client projects are managed has a palpable rhythm.

In order to facilitate the coordination of different functions within the agency – which includes teams of account managers, creatives, media planners, administrators, and other external agencies – each stage of this process is associated with a familiar set of documents. Thus, the agency's method of project management was reified in the style of a range of shared resources – initiation documents, project overview diagrams, prototypical design documents, customer journey models, action registers, and timing plans. The intended role of this material infrastructure can be tied to the goals of the agency's distributed teams, manifestations of an epistemic community, that need to coordinate their practices and work to a common method of creating and validating knowledge for their clients. However, the visibility of this method – its lucidity and materiality – also afforded its emulation by the client, the digital team. Unintentionally, the same set of devices that were used to coordinate the activities of different teams within the creative agency were, through habitual use and depiction, made available for disclosure by the digital team and transposed into the digital space.

Due to the action of the mechanisms described above, when Technology encountered the digital team at the first *Help Online* project workshop, they were, in effect, encountering a self-organized CoP. While Technology was

intending to contribute to the delivery of a routine technology project, the task of the digital community was to disseminate a new logic of project management. The remainder of this section will describe the informal devices that afforded the contagion of this innovation.

The initial project workshop led by Alex from Technology, which I attended with Chris and James, indicates something about how the *Help Online* project may have been managed in the absence of the digital community. The procedural imperative for Technology was to act as fast as possible to change the website in order to reduce the number of emails and telephone calls from customers who had visited the site. Alex envisaged that the majority of changes would be accomplished within three weeks. The implementation of ‘quick wins’ would lead to the realisation of identified cost savings. The workshop led by Technology was an opportunity to present the problem to all of the stakeholders, to get their ‘buy-in’ in the form of funding for the project, and to begin to make design changes to the website. In Alex’s eyes, the role of the marketing department was limited to acting as a ‘usability forum’ once the design changes had been made.

The digital community held an alternative view about how the project should be managed. The key difference between their method and Alex’s proposed way forward was the community’s desire to proceed on the basis of responding to a clearly defined set of ‘business requirements’. The satisfactory definition of these required more than the statement of a problem, such as reducing the number of telephone calls and emails to Customer Services. The project should be driven by the actual requirements of Customer Services. This procedural logic was grounded in the digital team’s way of working, which had been formed through repeated interaction and mutual engagement with Create, as described earlier. However, aligning the project to this mode of management required further work by the digital community, which was accomplished through the enrolment of numerous devices and human and non-human actors.

The first of these devices was the disclosure of a ‘digital space’. Until the restructuring of April 2004, a functional team responsible for products and services within a digital domain did not exist. When a digital team was created, there was a degree of ambiguity with respect to the role and remit of the team. In the hands of Chris, the team’s namesake became ‘any way we relate to our customers using mobile phones, website [...] there’s a whole range of stuff there’. So defined, Chris’s team had a stake in a wide range of projects because they involved a relation with Royal Mail’s customers. Informing others of the stake that the team had in projects in the digital space involved a great deal of informal interaction with other marketers around Media House. For instance, I witnessed an impromptu meeting that Chris organized with a marketer, who

worked in another area of Marketing, to discuss a product concept that was soon to be moving into development stage. Chris described the same digital strategy to this marketer as he had explained to me in interview, and asked the marketer whether he would like the product-in-development to be tied into the digital strategy through the mechanisms of the digital structure that he had described.

This discussion, like the interview I conducted with Chris, was supported by a sketched-out version of ‘the digital structure’ and the five-staged project management process in Chris’s notebook. In the terminology of actor-network theory, these sketches and process diagrams represented the generation of a set of artifacts or network ‘intermediaries’ that ‘define the skills, actions, and relation of heterogeneous entities’ (Callon 1991: 186). In the case of the digital space, aligning disparate groups – namely Technology, Marketing, and Customer Services – depended on the reification of a broad set of project management ideas into a common set of processes and representations. Introduced into conversation with different actors within Royal Mail, and supported by structure diagrams and project management flow charts, the ‘digital space’ was starting to move beyond the confines of the practices of the digital team, and appearing in notebooks and conversations in numerous places.

The second alignment device was political persuasion. At the initial *Help Online* workshop hosted by Technology, realigning the trajectory of the project to the method of management desired by the digital community depended on Chris and James interfering with the projected plan laid out in Alex’s presentation. Without having any process documentation ready-to-hand or an audience educated in the grammar of their project management philosophy, Chris and James resorted to an oratory interrogation of the procedural logic underpinning Alex’s approach. James undermined Alex’s proposed methodology by venturing forth an alternative procedural logic: one driven by the ‘fleshing out’ of the requirements of Customer Services. To strengthen their case for this radical approach, Chris invoked the ‘official’ hierarchy of Marketing by suggesting that compliance with the process of investment appraisal for the project would depend on building a business case proposal. This was decisive. The lack of a detailed period of exploration to make explicit the business requirements that the project would be responding to meant that Alex’s proposed project methodology would not be complying with the formal process for investment appraisal. This revelation meant that a further workshop to explicate the business requirements was an institutional necessity.

The third device that diffused the digital community’s project delivery method was endorsement. The method, which adhered to *Prince2* principles, was an adaptation of Create’s mode of organising project work with their own clients. The perception, that this method had been used successfully by the agency for

many years, was instrumental in facilitating the adoption of the method both within, and beyond, the digital community because Create were ‘the experts’. The perception that Create was a successful expert organization was reinforced by the style of their offices. Although Royal Mail’s head office was a pleasant and modern working environment, it was not adorned with the profusion of symbols of creative success that Create’s offices possessed: the soaring glass cylindrical building; the advertizing campaigns of top-name brands – their work – displayed proudly on the walls; the leather seats and couches; and the pots of cafetière coffee and freshly made sandwich platters. There can be little doubt that when the group of attendees arrived at Create’s offices for the second workshop that they would have been relatively impressed by the change of venue. Indeed, during the lunch break of the workshop, one of the attendees from Customer Services was so impressed with the general ambience that she asked James how easy it would be for a relative of hers to get a work placement with the organization.

The final device that drove the dissemination of the digital community’s logic was an embodied trait, tenacity. After the workshop ended – and Alex went for a cold drink with James and Chris – the message about effective project management was resolutely repeated: the business requirements should drive the project. When this informal meeting had finished Chris went straight to the touchdown area in head office and emailed Alex a briefing template for initiating a project, in accordance with stage one of the digital community’s project management process. At the second meeting between the two parties that took place a week later, Chris brought a diagram with him that depicted the document tree process for digital projects and he, with James, described again how they envisaged the project being managed. It was particularly important to present a good case for their alternative approach on this occasion because the project manager, Keith, was to be introduced at this meeting. Although Keith could ‘see two different approaches’ and exercised a degree of neutrality throughout the time I was involved in the project, he did assign authority to Chris at this meeting, ‘Chris is master’.

In summary, the digital community was able to realign the trajectory of the *Help Online* project because they had the wherewithal to deploy a number of enrolment devices: disclosure, political persuasion, endorsement, and tenacity. Like the development of the method of project management, each of these devices was operationalized via social and material resources cultivated in the practices of the digital community. The disclosure of the digital space was supported by numerous representations, such as sketches and process diagrams, which reified the intended practices across the domain of a new organizational function. Supported by sociality at the boundaries of the digital community, these artifacts materialised the digital space by bringing its salient practices in to

view to aid the perceptual awareness of the uninitiated. The process of political persuasion, undertaken by James and Chris in the context of a project workshop, exploited the dialogic of joint action (Shotter 1993). While the convenor of the workshop, Alex, may have arrived at the meeting room that day with a particular plan of action – and brought a carefully crafted PowerPoint presentation to support this plan – he could not prepare for the spontaneity that was afforded by the dialogical practice of the meeting. This opportunity was translated into dissonance by the digital team and the trajectory of the project was displaced from the projected plan. Create's endorsement of the project management logic was made meaningful by the decision to hold the second brainstorming workshop at the agency's offices. As many of the workshop participants would have been unfamiliar with the social practices of creative agencies, the style of Create's workplace – clad in the materiality of success – was used to reassure all present that the shift in the trajectory of the project was a positive one. Finally, the tenacity with which the management logic was publicized by the digital community was achieved through the tireless exploitation of opportunities for action – initiating meetings, setting agendas, making interjections, constructing emails, circulating document templates, and sharing the odd cola. Whether or not these activities issued from the machinations of a cognitive schema, the point I have made is that they were performed to maintain a particular stance on the project through the *labour* of tenacity.

5. Discussion

The extant literature on absorptive capacity highlights the role of formal rather than informal mechanisms for making use of external knowledge (Zahra and George 2002). This has resulted in the neglect of the social and material practices through which work and learning are accomplished, as research on CoPs highlights. This paper brought together these two literatures in order to further understanding of the social aspects of absorptive capacity. By examining the construction of knowledge within a marketing department, this paper also responds to calls to explore the generation of absorptive capacity outside R&D contexts (e.g. Lane et al. 2006). On the basis of the evidence presented here, it appears that the processes of absorptive capacity are (1) reliant on managerial investment, but (2) enacted through communities of practice, and (3) negotiated through power and boundary relationships. These three aspects of absorptive capacity are discussed in turn.

5.1 Managerial Investment in Absorptive Capacity

Cohen and Levinthal (1990) argued that an internal absorptive capacity is required in order to exploit external knowledge. Few studies, though, have explored the relevance of managerial policy for generating absorptive capacity,

with Lane and Lubatkin (1998) a notable exception who found learning was promoted among partners with similar organizational characteristics. However, many partnerships among organizations are formed to access new knowledge and skills precisely because they are not currently available in-house. Royal Mail wanted to work with ‘extremely different’ organizations to stimulate innovation, suggesting an absence of Cohen and Levinthal’s (1990) ‘prior, related knowledge’ when these partnerships were formed. Assuming this knowledge is either absent or at least insufficient for deciphering a partner’s routines, how can organizations build a capability to learn through interaction with other organizations? The *Web DM* project appeared to fail because of the absence of formal mechanisms for ‘bridging’ the cognitive distance between the creative agency and the product manager within Royal Mail. Coupled with the limited investment in training and development and lack of organizational slack due to the restructuring of the marketing department, the formal strategy of generating innovation through the exploitation of external knowledge failed because senior managers were not attentive to the absorptive capacity of the firm.

This supports cognitivist theories of organizational learning which suggest that managerial investment in absorptive capacity is prerequisite to learning (Cohen and Levinthal 1990; Nooteboom 1999). However, in contrast to current theory, the absence of investment was not felt most in hindering the development of internal cognitive knowledge, but was visible instead in the sociology of the social processes through which the *Web DM* project was actually negotiated – the arm’s length contract, the lack of common innovation objectives, and the demoralizing effect of the restructuring all reduced Royal Mail’s capacity to learn through interaction.

Following the restructuring of the marketing department, the shift to ‘retainer’ contracts among an adjacent marketing team started to facilitate the development of more durable working relationships between Royal Mail and external agencies. The *Help Online* project was supported by such a contract. The sustained interaction between the functional team and the creative agency that resulted afforded the generation of absorptive capacity through informal mechanisms. Through participation in a variety of project-based activities, the digital team comported with the agency’s way of working. The process of learning was supported by the visibility of the agency’s material infrastructure for ‘knowing’ (the shared process documentation used for managing client projects). Thus, by creating an environment which supports repeated interaction and mutual engagement among marketers and partner organizations, these organizational reforms do appear to increase the opportunities for learning through interorganizational relationships.

While not reified as such, this emerging style of management based on constructing more durable relations with partners is consistent with the ‘soft’ techniques suggested for cultivating CoPs (Wenger et al. 2002). However, the negative corollary of shoring up relations with external agencies was a reduction in investment in Royal Mail’s internal marketing knowledge and skills. This created a sense among some marketers that management felt the capabilities for generating innovation lay increasingly outside Royal Mail as external partners were needed to prop up the competitive advantage of the organization. As we saw, the product manager of *Web DM* chose to leave Royal Mail to work for another large organization, citing a lack of training and personal development opportunities as key motives for his decision. This confirms the influence of managerial sources of power on the development of an organization’s internal absorptive capacity (Todorova and Durisin 2007), with the perceived redistribution of resources away from internal teams and towards external agents engendering discontent among existing employees. This policy also risks threatening the sustainability of an internal tacit knowledge base which, by providing the basis for linking up internal routines with external sets of knowledge (Cohen and Levinthal 1990), remains worthy of managerial attention when building an external absorptive capacity.

5.2 Enacting Absorptive Capacity Through Communities of Practice

While the recent emergence of ‘process’ approaches to absorptive capacity has shed light on antecedent sources of learning ‘beyond the R&D context’ (Lane et al. 2006: 856), current thinking still stresses the importance of cognitive dimensions of learning. As such, a firm’s creativity is understood to stem from the mental models (individual and shared) of its employees (Lane et al. 2006). However, this ignores a domain of research on situated learning produced over the last decade which no longer privileges mental representations and emphasises instead the interactive and practice-based aspects of knowing (Shotter 1993; Lave 1996; Law 2004). Absorptive capacity has social and material dimensions that cannot be reduced to the capabilities of individual cognizing subjects. These dimensions are discussed in turn.

In accounting for the contrasting outcomes of the two projects no difference between the cognitive assets of the creative agencies involved could be identified (recall that the ‘failing’ project also involved a highly reputable agency). Instead, the results stemmed from variance in the sociology of interaction associated with each project. While the arm’s length contract between the client and agency seemed to sustain creative dependency in the *Web DM* project, the integration of the member of the agency within the *Help Online* project – signified by Chris’s ‘you don’t need to worry about niceties’ quip to the team – meant that the whole team participated together in creative practices.

Rather than being the product of ‘prior’ knowledge, the absorptive capacity of the latter team was developed through everyday interaction and mutual engagement, in a manner characteristic of CoPs (Wenger 1998). Instead of involving a process of knowledge ‘transfer’ from the agency to Royal Mail, what mattered was the relational proximity of the client organization to the creative mechanisms through which the new method of project management was generated. Specifically, learning took place through comportment in practice, rather than being manifested in a mental capacity constituted prior to it. The evidence from the projects suggests that social interaction produces knowledge through a process that resonates with Shotter’s (1993) notion of ‘joint action’ – knowing is improvisational, dialogical, and often unintended. Interorganizational CoPs, rather than being thought of as a context for transferring knowledge (Nooteboom 1999), are therefore best understood as a locus of knowledge formation.

The activities of the project teams were also mediated by a material infrastructure. Interaction among the teams involved relations among the human actors present, but also drew on communication technologies, customer surveys, legal contracts, creative briefs, workspace arrangements, and a variety of visual representations. In contrast to the emphasis on cognitive knowledge in current theories of absorptive capacity, the evidence presented here indicates that creativity also involves a repertoire of non-human or material agents that structure and (sometimes) stimulate processes of learning. This meshes with the work of Wenger (1998) which highlights the role of a community’s material infrastructure in providing tools for supporting interaction and rendering experiences meaningful, while overly zealous attempts to orchestrate institutional learning through the formalization of work-based routines can reduce practices to canonical procedures (Brown and Duguid 1991; Janowicz-Panjaitan and Noorderhaven 2008).

This tension between the informal and the formal was found in the trajectories of the projects studied at Royal Mail. In the *Web DM* project, the practices of the team were governed by institutional artifacts: notably the arm’s length contract between the parties, but also the outputs from market research and product development activity, as the organization’s strategic architecture dictated that these were produced by an adjacent function and the creative agency respectively. Interaction was mediated through these formal procedures and this impinged upon creativity within the project space itself. In contrast, the key artifacts associated with the *Help Online* team were produced by the digital community – these resembled the informal ‘shared repertoire’ produced through engagement in Wenger’s account of CoPs. However, these project management tools appeared as external artifacts to the technology function, encountering resistance as they attempted to cross this boundary. The digital team had to enrol

Technology into their informal logic of management to coordinate the practices of the different teams, through a relationship mediated by external objects (similar to the *Web DM* project). This suggests that not only institutionally imposed features of the working environment can inhibit the creativity of employees, but that informal arrangements led by CoPs can also have a negative effect on relations with adjacent organizational functions.

With regard to interorganizational relationships, learning is supported by the production of coordination devices by the interfacing employees. The construction of these artifacts appears to create an ‘outward’ absorptive capacity (Cohen and Levinthal 1990) by sketching out an interstitial organizational structure or joint way of working across boundaries. Equally, however, other internal stakeholders depicted in these structures but not consulted in their production may exhibit symptoms of the so-called ‘not-invented-here (NIH) syndrome’ (Cohen and Levinthal 1990: 133). These tensions cast doubt on the ease with which a large organization can conceive of itself as a ‘community-of-communities’ (Brown and Duguid 1991: 53) as autonomy from top-down management does not necessarily imply gaining workspaces driven by learning and free of ‘canonical’ procedures and conflict. When setting up interorganizational relationships, organizations need to strike a balance between promoting joint enterprise with external agents to support outward learning while also managing the likely knock-on effect on the politics of internal relations that constitute an ‘inward’ absorptive capacity. This challenge is discussed in further detail below.

5.3 Power and Boundaries in Absorptive Capacity

Much of the managerial literature on CoPs depicts them as stable groups of learning that can be aligned in pursuit of corporate objectives (Contu and Willmott 2003). However, managerial attempts to use CoPs in order to build an absorptive capacity may be frustrated by the presence of acrimonious relations among communities. While Wenger (2000) claims that innovation often emerges at the boundaries between communities, the analysis of the digital community revealed a degree of friction between the different groups involved in the cross-functional project that was led by this team. Rather than attempting to combine elements of the two modes of project management (‘quick wins’ and ‘requirements driven’), the trajectory of the project emerged from the approach that was able to achieve dominance. When the method favoured by the digital community did take precedence, members of the technology function resisted the logic of this technique at every stage of the process. Although the digital community were able to propagate their method, other groups were not interested in digesting the learning that had been cultivated within the practices

of an adjacent community. It may therefore be wrong to assume that community-led learning initiatives should necessarily be any more successful at an organizational level than ones which are implemented through formal hierarchical processes. In accordance with the findings of Ferlie et al. (2005), the boundaries among different professions appear to inhibit the diffusion of innovation. However, rather than being determined solely by pre-existing social and cognitive boundaries, the evidence from this study shows that boundaries (and connections) are also produced through the deployment of social and material resources in everyday interactions between different intra- and inter-organizational groups.

In an organizational context where there is friction at the boundaries of communities, the prevailing practices of learning may be orchestrated by the community with the wherewithal to work the social and material infrastructure to achieve their own ends. As we saw in the *Help Online* project, learning did not take place in a space bereft of power; rather, the course of the project involved the conflicting imperatives of the digital community (secure resources and achieve formal recognition); the marketing agency (extend their domain of ties within Royal Mail); the technology function (take ownership of technology projects); and the marketing executive (custodians of project investment). Identifying a coordination device that could accommodate, whether through hierarchy or community, the conflicting goals of such heterogeneous groups and align those in the pursuit of organizational learning remains a governance challenge that cannot be easily met. For example, even if the digital community's project management hub and process diagrams are considered as intended 'boundary objects' (Star and Griesemer 1989), it seems apparent that such tools of coordination cannot be considered without acknowledging the source of such devices and the issues of power and control that may be entangled in their use. In theorizing these relations, actor-network theory fills a gap in CoPs thinking by describing learning as a contested process in which one community mobilizes resources in order to enrol other groups and propagate innovations.

While CoPs have been proposed as the pragmatic basis of an organization's absorptive capacity (Brown and Duguid 1991), as such groups jostle for resources and compete to command the attention of others, the interfaces among CoPs still require strategic management. The inflection of power in these relations suggests that there is no straightforward and positive relationship between informal interaction and processes of learning, thereby challenging the results of Janowicz-Panjaitan and Noorderhaven's (2008) study of joint ventures. This outcome can be traced back to the ambiguity inherent in social

interaction; the dialogic of practice can generate creativity and innovation, but its provisional and emergent structure also affords misunderstandings, conflict and, ultimately, the unexpected that ‘risks disaster’ (Hatch 2002: 74). In organization theory, this ambiguity may help explain the enduring influence of cognitivism that puts interaction on a surer footing by situating it within a discourse of established competencies, learning routines, and linear pathways of knowledge development. However, the formal organization depicted through these theoretical constructs must, we deduce, be underlain by a field of social practices that are informal, provisional, and productive of uncertain outcomes. As the metaphor of absorptive capacity adapts to take account of the social processes of organizational learning, future studies might attend to the ambiguity of sociality that renders the formal less formal and the informal a more contingent capacity.

6. Limitations of the Study and Future Research

The limitations of this study need to be acknowledged. First, the fieldwork was carried out by only one researcher (the author) affording a high degree of interpretive agency in the field that could not be normalized by comparing notes with other researchers. Due to the intensive resources required, it is common for solo researchers to undertake extended ethnographies of organizations (e.g. Orr 1996; Thompson 2005), but ethnography’s capacity to recognize and assimilate useful information could be extended if a team-based approach were more commonly adopted. Second, the research was conducted at a large state-owned organization in the midst of a restructuring programme. This had a bearing on its awareness of, and resources available for developing organizational mechanisms that promote absorptive capacity. Private sector organizations may have stronger ‘combinative capabilities’ (Jansen et al. 2005) and therefore comparative work including such organizations acting within the same sector could provide a more informed view of the relative contribution of formal and informal mechanisms for enhancing absorptive capacity. The inclusion of such organizations could further research into the governance mechanisms needed to leverage CoPs in generating absorptive capacity.

Understanding the tools of such management against a politicized organizational background necessitates further research into the organizational ‘communication systems’ advocated by Cohen and Levinthal (1990), the operation of which, beyond supporting integration (Zahra and George 2002), largely remains a black box. A number of questions come to mind. How might organizations overcome unequal relations of power among different functional groups (such as marketers and technologists) to produce organizational learning? What explains any variation in the absorptive capacities of public and private sector organizations? And, in a context of market liberalism where numerous stakeholders demand

access to ‘governable’ forms of knowledge, to what extent is ‘joint action’ or improvisation a realistic metaphor for describing the governance of interorganizational relationships? In addressing these questions, it is likely that context-specific variables, such as market structure, organizational architecture, and knowledge domain, will need to be taken into account alongside practice-based evidence of situated learning to qualify the effect of communities on absorptive capacity in a variety of organizational settings.

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