Knowledge sharing in organisational contexts: a motivation-based perspective

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Abstract

Purpose – Facilitating knowledge sharing within organisations is a difficult task: the willingness of individuals to share and integrate their knowledge is one of the central barriers. This paper aims to develop a motivation-based perspective to explore how organisations resolve the social dilemma of knowledge sharing.

Design/methodology/approach – The analysis builds on a three-category taxonomy of motivation, adding “hedonic” motivation to the traditional dichotomy of “extrinsic” and “intrinsic” motivation. It uses case studies gleaned from the literature to explore the interactive effects between the different motivators in two different types of knowledge-intensive organisations: professional bureaucracy and operating adhocracy.

Findings – Within a professional bureaucracy, the social dilemma of knowledge sharing may be overcome through normative motivation, with provision of hedonic motivation through extrinsic incentives such as training and career progression. In an operating adhocracy where interdependent teamwork is vital, it may be overcome through normative alignment reinforced by intensive socialisation. Extrinsic motivators that align with hedonic motivation may also reinforce the propensity for knowledge sharing. In both organisational types, financial extrinsic incentives do not appear to be relevant on their own, and may “crowd out” other motivators.

Research limitations/implications – The cases reported were chosen from the existing literature and, although many were not designed specifically to address motivational issues, suggestive conclusions are drawn. Most of the cases were drawn from organisations rooted in the Anglo-American context and thus care would be needed in generalising the findings to organisations in other contexts.

Originality/value – The paper represents the first attempt to apply a three-category taxonomy of motivation to examine knowledge-sharing behaviour in organisations. It highlights the interaction between the different motivators and provides a basis to integrate further the work of social psychologists and socio-economists on incentives and motivation in the context of knowledge sharing.

Keywords Knowledge management, Learning organizations, Human resource management, Incentives (psychology), Motivation (psychology)

Paper type Conceptual paper

Introduction

Knowledge sharing is a key process in translating individual learning into organisational capability (Frey and Oberholzer-Gee, 1997; Nahapiet and Ghoshal, 1998). But facilitating knowledge sharing is a difficult task: the willingness of individual to share and integrate their knowledge is one of the central barriers. Despite the voluminous literature on organisational learning and knowledge management, the nature of the relationship between individual motivation and knowledge sharing in organisations remains largely unexplored and poorly understood (Osterloh et al., 2002; Milne, 2007).

Existing theories of the firm have tended to place emphasis on the centrality of one particular motivational mechanism in governing the behaviours of firm members (Gottschalg and Zollo, 2006). Each of the theories on its own offers at best a partial explanation of why individuals do or do not share knowledge. The knowledge-based view, which has gained...
wide popularity in recent years, focuses on the social and collective dimension of organisational learning, viewing organisations as knowing entities and communities of practice that foster identity, commitment and learning (Brown and Duguid, 1998; Nonaka and Takeuchi, 1995; Spender, 1996). It implicitly assumes a utopian view of “benevolent co-operators” who voluntarily give up personal knowledge without appropriate reward. While it draws our attention to the importance of normative intrinsic motivation, it neglects potential conflicts of interest and incentive issues (Foss, 2003). This “positive” view stands in stark contrast with the “negative” transaction cost view that assumes the worst self-interested opportunistic behaviour among firm members who seek to hoard knowledge unless sanctioned or induced to deviate from such behaviour (Williamson, 1996). The transaction cost perspective recognises that transforming conflict among self-interested actors into cooperation is a non-trivial problem. It recognises the problem of social dilemmas of knowledge sharing in organisations (Cabrera and Cabrera, 2002; Cress and Martin, 2006) and assumes that these dilemmas can be resolved through monitoring and incentive alignment (Teece, 2003). The basic premise is that incentive-driven extrinsic motivation dominates other kinds of motivation.

In this paper, the authors argue that theories of organisational learning and knowledge creation will benefit from the insights of both these two perspectives, taking their differing behavioural assumptions and emphasis on the centrality of particular motivational mechanisms as a starting point. The analysis builds on the large literature on employee motivation (Amabile, 1993; Deci, 1976; Deci and Ryan, 1985; Frey, 1992; Locke and Latham, 2004), and recent research on the management of motivation as distinctive firm competences (Gottschalg and Zollo, 2006; Osterloh, 2005; Osterloh and Frey, 2000). The aim is to understand how organisations resolve the social dilemmas of knowledge sharing, and the ways in which different motivational mechanisms interact to foster the transfer and creation of knowledge.

By focusing on the motivational processes and the relationship between different types of motivators, the paper seeks to bridge the traditional dichotomous view of treating knowledge sharing as either dominated by opportunistic or altruistic behaviour. It assumes that both kinds of behaviour are plausible and potentially exist, and the willingness of organisational members to engage in knowledge sharing can be viewed on a continuum from purely opportunistic behaviour regulated by management authority to an apparently altruistic stance fostered by social norms and group identity (Christensen, 2005). The authors argue that motivational mechanisms play a key role in regulating and translating potential into actual behaviour, and they underline the complex dynamics of knowledge sharing and creation within different organisational contexts.

The analysis presented in the paper will draw on existing empirical studies to explore the different approaches used to resolve the social dilemma of knowledge sharing within different organisational contexts. In looking at social dilemmas and the ways in which organisations address them, it examines the relationship between human resource management (HRM) practices in use and the motivational disposition of employees to knowledge sharing. The authors believe that adopting a motivation-based perspective will add new insights into our understanding of the nature of the firm as a knowledge-creating organisation. It could offer proposals for action in terms of organisational design and management practices that can better meet practitioner expectations than those derived from the narrow transaction-cost or knowledge-based perspectives.

**Motivation and knowledge sharing**

*A taxonomy of motivation and motivational mechanisms*

In examining motivation, Deci’s (1976) original separation of motivation into extrinsic and intrinsic is taken as a basis. Extrinsic motivation allows individuals to satisfy their needs indirectly by obtaining additional resources (e.g. money, promotion and other non-financial resources). Markets systematically use extrinsic incentives (profits and rents) for motivational purposes. In an organisational context, extrinsic motivators may vary from
piece-rate pay (Lazear, 1988) through pay for performance (Prendergast, 1999) to career progression (Morris and Empson, 1998). Extrinsic motivation may support the transfer of explicit knowledge, which is measurable but often fails in the case of tacit knowledge because of its intangible and emergent nature. The exclusive use of extrinsic motivation often places the individual in a transactional rather than a relational stance in respect of the organisation.

Intrinsic motivation gives immediate need satisfaction: an activity “is valued for its own sake and appears to be self sustaining” (Deci, 1976, p. 105). It facilitates the generation and transfer of tacit knowledge under conditions in which extrinsic motivation fails (Osterloh and Frey, 2000). The analysis presented in the paper uses Lindenberg’s (2001) division of intrinsic motivation into normative and hedonic types which interact with each other and with extrinsic motivation, providing a more complete match between the individual and organisational environments.

Normative intrinsic motivation is directed towards the individual’s sense of compliance with personal and social norms, expressed at an organisational level through the organisation’s espoused values, and for the individual in terms of their identification with the social groups to which they affiliate (Kreps, 1997). The degree to which individuals act or do not act when normatively motivated depends on the importance that they attach to compliance in a given context and also the external reaction to non-compliance.

Hedonic intrinsic motivation is derived from engagement in self-determined, competence enhancing and enjoyable activity, achieved through physical and social wellbeing and improvement in the individual’s condition (Lindenberg, 2001). In terms of knowledge sharing, this influences the willingness of an individual to share knowledge, depending on the importance that the individual attributes to being engaged in such activity in the context of the task and perceived task characteristics. Hedonic motivation has been shown to be an important factor stimulating creativity and innovation, in that strong hedonic motivation induces knowledge-seeking behaviour and increases cognitive effort (Amabile, 1997). This implies that a different focus may be necessary in looking at the tension between sharing knowledge in the contexts of knowledge exploitation and augmentation, with the latter possibly building on a higher hedonic element than the former.

**Interaction effects among different motivators**

The above three types of motivation are not necessarily additive, and there may be complex interaction effects between them. The relationship between extrinsic incentives and intrinsic motivation is analysed in terms of “crowding” effects by economists (Benabou and Tirole, 2003; Frey and Jegen, 2001). Social psychologists use the term “motivational synergy” to conceptualise this interactive effect (Amabile, 1997; Hennessey and Amabile, 1998).

Extrinsic rewards may undermine intrinsic motivation for interesting tasks and encourage knowledge hoarding. Research has confirmed the existence of this “crowding-out” (Frey and Jegen, 2001) or “non-synergistic” effect (Amabile, 1997). Within these, several key factors have been put forward to explain the possibility of “crowding-out” effect, relating to the possibility of agents seeing their self-determination or self-esteem affected by incentives, or a change in the level of involvement and enjoyment (Amabile, 1997; Seo et al., 2004) which may affect the overall level of motivation for a given goal. Self-determination may be reduced if the actual or perceived locus of control shifts outside the individual, lessening autonomy and reducing the scope of the individual to act in an altruistic manner (Frey and Oberholzer-Gee, 1997). Thus extrinsic motivators in terms of goal and task constraint may circumscribe the individual’s autonomy and lessen intrinsic motivation. Self-esteem may be lessened when the individual’s intrinsic motivation is not acknowledged, implying that their competence or effort are not appreciated. This may occur when incentives are given for specific performances or behaviours, quantifying effort and competence, thus changing the stance with regard to the task from an internally driven, relational one to a reward driven, transactional one. This indicates that incentives that quantify effort are rewarded by the effort that the individual deems necessary to obtain the reward. In an organisational setting, this can be seen where employees are rewarded for contributing to
knowledge-bases and make only sufficient contribution to gain the payoff, or when sharing knowledge enables others to gain reward in place of the individual, overcoming normative or hedonic motivation to share knowledge (Kreps, 1997).

Conversely, the beneficial effect of extrinsic motivators on hedonic and normative motivation is termed “crowding-in” by Frey and Jegen (2001) and “synergistic” by Amabile (1997). These operate by being perceived as supportive by the individual and congruent with the underlying normative and hedonic motivational preferences. Extrinsic motivators that provide feedback, recognition and reward and which confirm or improve competences lead to increased self-esteem. Similarly extrinsic motivators such as career progression or increased involvement that aligns with the individual’s normative and hedonic motivators can have a synergistic effect. Furthermore, high personal commitment (normative) and enjoyment (hedonic) of the task at hand can be unaffected by extrinsic motivation (Amabile, 1997); in these instances, the activity itself provides sufficient motivation.

The combined effects of “crowding-out” and “crowding-in” on motivation are not reducible to a simple “yes” or “no” situation, but may be analysed as a continuum between the two regulated by a specific combination or bundle of incentives and motivational mechanisms within different organisational contexts. Normative and hedonic motivation are seen to be essential in knowledge sharing and creative activities (Amabile, 1997; Huber, 2001), and the options for an organisation in terms of motivation are limited by its structure and nature of tasks performed.

Overcoming the “socal dilemma” of knowledge sharing within organisations

Why do people share or hoard knowledge?

Why do individuals share knowledge – an intangible private asset – in the context of an organisation, when their effort is neither directly measurable nor sanctionable? This is examined through the lens of Cabrera and Cabrera’s (2002) work on knowledge sharing and social dilemmas. Shared knowledge becomes a public good from which interdependent members of an organisation can benefit directly, whether or not they have contributed. This may lead to opportunistic behaviour and free-riding as there is a possibility to benefit without contributing – from an economic perspective, the individual gains without the cost. The cost to individuals may not only be in the effort and time spent in sharing knowledge but also, depending on the organisational context, by sharing knowledge they may diminish their own opportunities for advancement or enhance the advancement opportunities of others, thus losing in internal competition. Renzl (2008) refers to this as the “fear of losing one’s unique value”.

A further attribute of the public good dilemma is that when non-contribution is not sanctioned and few individuals are perceived to contribute, the motivation to contribute diminishes and the value of contributing to the public good becomes questionable. This effect operates at different levels. First, the normative motivation to share knowledge is lessened as not sharing is seen to become an acceptable practice. Second, the extrinsic motivation to share, expressed via the (dis)incentive of sanctions, is not present, thus reinforcing the change in normative motivation. Cabrera and Cabrera (2002, p. 693) suggest that most individuals are willing to bear the cost of contributing to a public good, and receiving its benefits, as long as there was “an assurance that everybody else was going to pay his or her share”. This
suggests that reinforcing normative motivators to share knowledge, providing suitable incentives for doing so and changing the perceived locus of ownership of knowledge as a public rather than private good may augment knowledge sharing propensity amongst individuals in an organisation. Implementing these changes at an organisational level involves changes in appraisal and reward systems, as well as inculcating values aligned with acceptable and encouraged practices and providing a setting wherein knowledge sharing can occur.

The social dilemma of knowledge sharing can be overcome in part by restructuring the payoff function (Cabrera and Cabrera, 2002, p. 695). From the inter-related effects of motivation, pure extrinsic motivation in financial terms will be of little use unless sufficiently high (Gneezy, 2003). However, relocating the focus of payoff from the individual to organisation and/or team should encourage cooperative action, as peer pressure will come into play: contributing enhances potential gain; not contributing decreases both personal potential gain and that of others (Quigley et al., 2007). This does not preclude individual incentives recognising and rewarding knowledge sharing, but these may be more effective if they enhance self-determination (autonomy through career progression) and self-esteem (competence enhancement through training) and should be congruent with the individual’s motivational preferences, not only within but outside the organisation.

Normative motivation may be influenced by the organisation, reinforcing the individual’s current motivational stance towards knowledge sharing. This is dependent not only on promoting an ethos of knowledge sharing through organisational values, but also acknowledging the contribution of the individual’s normative attitude towards sharing, which may draw on their professional background (Lam, 2000) and embedded culture (Lam, 1997). This in turn raises possible issues of the legitimacy of norms between different epistemic and embedded cultures. The knowledge sharing literature stresses the importance of socialisation, common understanding and trust building in stimulating knowledge sharing through promoting normative congruence between individuals and between individuals and the organisation. But what means does an organisation have for enhancing hedonic motivation, a quintessentially personal aspect that cannot be dictated externally? This can potentially be answered by creating an environment that allows individuals to satisfy their motivational preferences and concords with their needs for self-determination and self-esteem. We suggest that this can be achieved through careful work design which acts at a hedonic level but which is also integrated with normative and extrinsic motivators available to the organisation.

This may seem Utopian, leading to the possible “crowding-out” of productive work as individuals engage only in enjoyable work. The challenge for organisations, therefore, is to balance the application of HRM practices to achieve a suitable mix for individuals. However, heterogeneity in incentives and practices may be perceived as unfair and difficult to manage, whilst homogeneity may lessen knowledge sharing but is perceived as fairer and easier to manage.

Knowledge sharing and motivation in different organisational contexts

The range of motivators at the disposal of an organisation and its underlying motivational basis differ between different types of organisations. Clearly, the available motivators, those used and those that are effective in a windscreen-repair firm (Lazear, 1988) are different from those used in a professional services firm (Morris and Empson, 1998), and thus the concomitant social dilemmas and potential crowding effects vary between organisational types. The analysis presented below uses the ideal-type firm structures derived from Mintzberg (1980) and builds on the work of Lam (2000) on organisational forms and knowledge sharing. It focuses on two organisational types that relate to knowledge intensive firms:

1. professional bureaucracy; and
2. operating adhocracy.
Both types rely on prior high levels of expertise and training, resulting in skills and knowledge that are personally held but need to be shared to meet the organisation's goals. Within both types there is low formalisation of behaviour and relatively high autonomy accorded to the individual experts. The social dilemma common to both relates to the degree and extent to which individuals are willing to contribute and use their personal, tacit knowledge to the “public good” of the organisation. The relatively loose structuring and high complexity of the two types coupled with high levels of training contrasts with the machine bureaucracy, giving greater scope for the use of normative and hedonic motivation, which are necessary components to overcome social dilemmas. These two knowledge-intensive types, however, differ between their main coordination mechanisms, patterns of work organisation and the degree of standardisation of knowledge in use. A comparative analysis of these two types will give important insights into the interactive effects of the three different motivators and how these are melded through work norms and HRM practices.

A professional bureaucracy derives its capability from the formal professional knowledge of highly trained individual experts operating in an autonomous work environment with coordination achieved by standardisation of skills and knowledge. Typical examples include large law firms, hospitals and many public sector organisations. Task performance can be monitored and regulated by external professional bodies and standards, and extrinsic rewards such as financial gain, professional recognition and career progression. Such experts can be highly mobile in the external labour market and retention can be an issue (Hall and Sapsed, 2005; Robertson et al., 2003). Concordance of values runs along professional lines through embedded professional norms and inculcated organisational ones. The form of working within the professional bureaucracy may be within a single professional grouping or functionally segmented, leading to tensions between epistemic legitimacy, contexts and goals, potentially limiting sharing across functional groups (Ferlie et al., 2005; Kinti et al., 2005). This adds to the complexity of potential social dilemmas and differing effects of motivational perspectives and crowding, as knowledge is held in the individual and affirms their status (Cabrera and Cabrera, 2002).

Within a professional bureaucracy, administrative control tends to rest within the professional groups and due to the autonomy and heterogeneity of professional groupings, there may be different motivators used within the organisation (Morris and Empson, 1998). The reinforcement of professional inter-group boundaries with administrative ones is further likely to generate a strong sense of professional rather than organisational identity, and thus alignment with professional rather than organisational norms. Whilst the high degree of task autonomy associated with normative and hedonic motivation enables the generation of tacit knowledge in problem solving, the high level of individual specialisation and functional segmentation means that the tacit knowledge is circumscribed and contained. Underpinning knowledge is codified, with an expectation that the results of knowledge exploitation will similarly be made explicit, for example in the generation of intervention reports and best practices. This further implies that an individual's tacit knowledge will be made public within the organisation, leading to issues of degree and quality of disclosure. The social dilemma within the professional bureaucracy hinges on whether the individual hoards their knowledge for pursuance of their career, whether to share it within their professional community or to share it within the organisation. The challenge for the organisation is to make use of the high inherent normative professional motivation and to reinforce it with other types of motivators.

“Extrinsic motivators that provide feedback, recognition and reward and which confirm or improve competences lead to increased self-esteem.”
The operating adhocracy epitomises the project-based organisation, drawing its capability from the diverse know-how and practical problem-solving skills embodied in individual experts operating in market-based project teams. Organisations engaged in providing non-standard, creative and problem-solving services directly to the clients, such as professional partnerships, software engineering firms, and management consultancies are typical examples. Compared with the professional bureaucracy, there is a lower degree of formalisation of work and knowledge. Unlike the independent experts in a professional bureaucracy, the specialists from different professions in an adhocracy must work together on multidisciplinary teams and combine their knowledge to produce creative solutions for their clients. There is a high identity with the organisation and professional specialism, and high levels of autonomy in terms of working practices and team membership. There is little hierarchical structure, with quasi-formal authority given to staff, extending to an extent through to strategy making, emergent from the ad-hoc decisions made for all projects. This implies high levels of participation within the organisation, and lessens differentiation between the planning, design and execution of projects. Knowledge sharing within the adhocracy is person-to-person, although it may rely on codified rules, and shared work practices and routines derived from previous and ongoing projects. Coordination within an operating adhocracy is achieved through mutual adjustment, necessitating the alignment of the interests and skills of team members towards the project's goal and firm's overall objectives through both professional and consensual norms. This means that high normative motivation and congruence are required to develop team spirit and foster the integration of individual tacit knowledge within the team. Furthermore, because of the fluid nature of the organisation and thus high need for reactivity, barriers to socialisation, contextualisation, common knowledge and expertise levels should be low to facilitate person-to-person knowledge sharing. In this kind of organisation, high powered extrinsic rewards such as performance-related pay and “up-or-out” promotion rules may be used to align incentives of the individual experts with the interest of the organisation (Morris and Pinnington, 1998; Teece, 2003). However, the underlying strong, congruent normative motivation that integrates the team may inhibit hedonic motivation in terms of creativity (Amabile, 1997). Management face the difficult task of having to maintain a delicate balance between extrinsic and intrinsic motivational mechanisms. Another major dilemma is that strong normative motivation that serves to integrate individual with the team may inhibit hedonic intrinsic motivation (Hennessey and Amabile, 1998; Seo et al., 2004). The operating adhocracy is an organisation riddled with ambiguities and dilemmas (Mintzberg, 1980; Robertson et al., 2003). It is the most innovative yet least stable organisational form.

Some empirical examples

Drawing on case studies gleaned from the literature, this section explores how the two different organisational types seek to solve the problem of knowledge sharing and the interactive effects between the different motivators. In classifying the cases into one or the other types, the setting, type of work and dynamism have been taken into account. All cases deal with professional/expert work, ranging from the UK's public health sector to change consultants. Across the case studies, the authors have looked for evidence of the types of motivators used and their relationship with HRM practices within the firms. Additionally, the authors have looked for evidence of crowding and synergy, social dilemmas and the tension between knowledge exploiting and knowledge augmenting modes. A detailed summary of the cases is provided in Table I.

Case study analysis: professional bureaucracies

The analysis suggests that whilst some firms place an emphasis on one motivational type, the interaction between motivators is telling, in some cases “crowding in” and in others “crowding out”. Within the professional bureaucracies studied, there are two cases that use predominantly extrinsic motivation with an attendant tendency to diminish knowledge sharing.
Table I  A summary of the empirical cases

<table>
<thead>
<tr>
<th>Case/reference</th>
<th>Context</th>
<th>Type</th>
<th>Extrinsic</th>
<th>Normative</th>
<th>Hedonic</th>
<th>HRM practices</th>
<th>Crowding/alignment</th>
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<tbody>
<tr>
<td>1. Morris and Empson (1998)</td>
<td>Small change management consultancy</td>
<td>Operating adhocracy</td>
<td>High alignment with firm’s knowledge-sharing values, identification with firm</td>
<td>Profit share based on salary, pleasant environment</td>
<td>Reliance on professionalism of staff</td>
<td>Sense of enjoyment working for company</td>
<td>High autonomy through design and type of work</td>
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<td>2. Robertson et al. (2003)</td>
<td>Science-based consultancy</td>
<td>Operating adhocracy</td>
<td>High identification with firm, knowledge-sharing values are part of recruitment</td>
<td>Professional training: reward linked to outcomes through patents</td>
<td>High knowledge-sharing values, professional norms; social identity through professional alignment is high; extensive socialisation</td>
<td>Sense of well-being with company, challenging work</td>
<td>Recruitment on fit and expertise; professional training funded; appraisal linked to knowledge-sharing outcomes</td>
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<td>3. Robertson et al. (2003)</td>
<td>Legal professional service firm</td>
<td>Operating adhocracy</td>
<td>High identification with firm; sharing of external professional networks; recruitment for “fit” and sense of bringing part of an “elite”</td>
<td>Recognition through competence and professional status afforded by firm; creative, challenging professional environment; high autonomy</td>
<td>Extensive socialisation opportunities; combined with firm’s values of knowledge sharing and professional excellence</td>
<td>Identification with prestigious firm, excellent working conditions; assignments are an opportunity to learn; work design enhances hedonic motivation</td>
<td>Recruitment based on expertise and alignment with firm’s professional and knowledge-sharing values; new members are intensively exposed to firm’s working practices and values</td>
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<td>4. Swart and Kinnie (2003)</td>
<td>Software development</td>
<td>Operating adhocracy</td>
<td>Flat hierarchy with average salary; few unique projects building on prior experience and new knowledge; high alignment with firm’s values</td>
<td>Responsibility based on competence for a given project; training in work- and non-work-related areas</td>
<td>Mentoring/apprenticeship model and job rotation lead to socialisation and competence enhancement</td>
<td>Possibility of non-work-related training opportunities to work on “cutting-edge” projects</td>
<td>Recruitment for fit with firm; Professional government of employee committee structure; appraisal by peers, team members and management; rewards linked to knowledge sharing</td>
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<tr>
<td>5. Pan and Scarbrough (1998)</td>
<td>Multinational specialty chemicals</td>
<td>Professional bureaucracy</td>
<td>Firm espouses a “knowledge-enterprising culture” (p. 61); emphasis on change towards sharing through middle management becoming facilitators rather than gatekeepers</td>
<td>Exceptional performance recognised through special events; hierarchical boundaries are softened; vertical- and horizontally knowledge seeking and sharing</td>
<td>Firm-wide values of knowledge sharing; hierarchical boundaries are softened; vertical- and horizontally knowledge sharing and socialisation</td>
<td>Base of use and availability of ICT does not raise additional barriers to knowledge sharing</td>
<td>Exceptional performance is recognised through special events; knowledge sharing is part of appraisal; recognition and reward; active approach to involves: knowledge-sharing values of firm</td>
</tr>
<tr>
<td>6. Morris and Empson (1998)</td>
<td>Tax and audit branch of large professional service firm</td>
<td>Professional bureaucracy</td>
<td>Highly autonomous within the PSF’s framework of working practices; junior staff engaged in knowledge-exploiting; senior staff in knowledge-generating activities</td>
<td>Opportunities to specialise; Extensive training; recognition of competence; status maintained through continued sharing of high quality knowledge</td>
<td>Knowledge sharing part of “normal” working practices; regular conferences allow knowledge sharing and socialisation</td>
<td>Increase in professional knowledge through assignments</td>
<td>Greater responsibilities included: professional linkages, self-measured through knowledge-sharing outcomes</td>
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<tr>
<th>Case Reference</th>
<th>Context</th>
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<tr>
<td>7. Ferlie et al. (2005)</td>
<td>UK public health sector, eight studies of innovation transfer</td>
<td>Professional bureaucracy</td>
<td>Recognition for innovation transfer and adoption; changes in level of responsibility and working practices</td>
<td>Professional level for knowledge sharing</td>
<td></td>
<td></td>
<td>In the unsuccessful cases, different epistemic and embedded cultures and inter-professional boundaries coupled with a likelihood of change in working practices and responsibilities, lead to a loss of self-esteem and self-determination as the outcome of sharing knowledge, crowding out inherent normative motivation. In the successful cases, high socialisation and normative and goal congruence were present, in addition to recognition, enhancing knowledge sharing. Knowledge is shared within the limits of necessity, with extrinsic motivation crowding out attempts to introduce a knowledge-sharing culture. The perception that knowledge owned personally, even if gained through the firm’s resources, augments knowledge hoarding, by behaving opportunistically. High levels of socialisation and competition enhance reinforcement through exposure to different settings. Rewards that include the main vehicle for tacit knowledge sharing, which is not crowdsourced - the extrinsic motivation resulting in competition enhancement aligns with the individuals’ norms, allowing increased self-esteem (competition enhancement and advancement within professional bodies). Knowledge sharing achieved through inherent normative motivation in addition to hedonic motivation of job design and training.</td>
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<td>8. Hall and Sapsed (2005)</td>
<td>Consulting engineers</td>
<td>Professional bureaucracy</td>
<td>Career progression through professional expertise</td>
<td>Firm is attempting to promote organisation-wide sharing ethos</td>
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<td>9. Hall and Sapsed (2005)</td>
<td>Oil and gas services firm</td>
<td>Operating adhocracy</td>
<td>Knowledge augmenting within the operating core. Firm’s goal is to accumulate expertise within its staff</td>
<td>Bonuses for contributing to codified knowledgebase built into project budget</td>
<td>Firm emphasises interdependence on expertise</td>
<td>Training in professional specialisation; varied, challenging work</td>
<td></td>
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<tr>
<td>10. Hall and Sapsed (2005)</td>
<td>Aerospace simulator developers</td>
<td>Professional bureaucracy</td>
<td>All employees’ time is costed; there is a ‘lessons learned’ database, but contribution does not form part of the appraisal process</td>
<td>Reward linked to project outcome and targets</td>
<td>Inherent normative motivators</td>
<td>Appraisal and reward linked to meeting project targets</td>
<td>Extrinsic motivation linked solely to target meeting, and knowledge-sharing opportunities are limited by the “flat” aspect of person-to-person sharing, which combines, as time taken to seek or share knowledge is divisible from the project’s budget, thus lowering the potential target meeting ability. In this case, extrinsic motivation crowds out inherent normative motivation, resulting in knowledge hoarding. Extrinsic motivation for high-quality knowledge, coupled with the firm’s knowledge-sharing values, support the working practices that lead to knowledge sharing. This does not address the issue of staff retention, implying that there are other motivations that are not addressed.</td>
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<tr>
<td>11. Hall and Sapsed (2005)</td>
<td>Management consultancy – large professional service firm</td>
<td>Professional bureaucracy</td>
<td>Career advancement through high-quality contributions</td>
<td>Knowledge-sharing ethos underpinning day work practices</td>
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</table>
In Hall and Sapsed’s (2005) study of an aerospace simulator firm in financial difficulty (case 10), all activity is costed and knowledge sharing is seen as a billable activity. Within the firm, reward depends on the project’s outcome. Knowledge sharing in this case is reduced to a minimum as taking the time to ask for or share knowledge lessens the potential for reward, leading to opportunistic behaviour. Notably, the feeling of the employees was stated as “we are very much structured around how much it costs for me to sit down with somebody for half an hour” (p. 67). In this case, the social dilemma is reinforced, as the cost of contributing to the public good by sharing or seeking knowledge outweighs the potential benefit. In their study of a firm of consulting engineers (case 8) facing demographic challenge through the retirement of senior engineers the main route for career advancement was through the use of formal professional knowledge. Within the firm, there was little ethos of knowledge sharing and the perceived locus of knowledge ownership was at a personal rather than an organisation level, even though individuals recognised that the organisation’s resources were used to augment their skills. The social dilemma is twofold, as knowledge was not seen as a public good: first, sharing could be detrimental to career prospects – an extrinsic disincentive; second, with little normative motivation to share, even those about to retire and thus no longer competing at a career level, did not share. In these instances, extrinsic motivation crowds out any inherent normative motivation for employees to share knowledge and the locus of ownership can be seen to be relevant in reinforcing knowledge hoarding.

Ferlie et al.’s (2005) studies (case 7) of barriers to knowledge transfer and innovation in the UK public health sector, itself comprised eight case studies, highlights the tensions between different professional groups within a professional bureaucracy. The social dilemma in some of the cases related to the perceived legitimacy of the public good. Sharing knowledge would lead to a change in the balance of roles and responsibilities between different professional groupings as a result of the innovations in healthcare practice. This raises a further issue, that of competing epistemic legitimacy between professional groups in complex settings, leading to a lack of sharing not only because there are doubts as to the validity of the knowledge claims but also, in extrinsic motivational terms, as the outcome may lead to a loss of autonomy and self-esteem within one of the professional groups. Thus within complex professional bureaucracies there may also be a case for studying knowledge sharing in the light of politics and power as adjuncts to normative and extrinsic motivation as highlighted in de Laat’s (1994) study of the effects of matrix management in R&D teams, and Swan and Scarbrough’s (2005) study of political effects in innovation networks.

Within professional bureaucracies where knowledge is seen to be shared, the use of a combination of extrinsic motivators that align with the firm’s normative and the individuals’ inherent motivators seems to have more success. Career progression linked to appraisal systems which take into account knowledge sharing demonstrates recognition through competence and adherence to the organisation’s espoused knowledge sharing values. In Hall and Sapsed’s (2005) study of a large professional service firm (case 11), the quality of shared knowledge via contribution to a database forms part of the appraisal system, and provides a route for career progression, thus linking sharing to extrinsic motivation. This is coupled with socialisation opportunities to reinforce normative alignment. Self-selected training is available, which further increases the sense of autonomy in the choice of competence-enhancing activities.

This synergistic effect is echoed in Morris and Empson’s (1998) case relating to a professional service firm (case 6) in which knowledge sharing has become part of standard working practice and the rewards for sharing high quality knowledge lead to increased responsibility and further specialisation. This aligns with the individual’s inherent hedonic motivation: the extrinsic motivation provided by increased responsibility and further specialisation opportunities lead to possibilities of increased self-esteem and competence-enhancing activity. Normative motivation is further enhanced by regular socialisation opportunities. This has the effect of overcoming the social dilemma by providing a net benefit in sharing, coupled with the underlying need to share as part of the firm’s modus operandi. The situation is different for senior partners, where competition is fierce and recognition for innovation is realised through status by co-option to a “think-tank”
of knowledge contributors. In order to maintain sharing behaviour, remaining as a contributor is concomitant on the continued sharing of knowledge. Here, the initial extrinsic motivation through recognition is reinforced by a desire to retain status: “It is a great honour to be asked to join this think tank. Joining the group has transformed the behaviour of some individuals who do not normally share their ideas” (Morris and Empson, 1998, p. 617).

On similar lines, Pan and Scarbrough’s (1998) study of Buckman Labs (case 5) illustrates that normative alignment through working practices in conjunction with recognition for outstanding contributions and the possibility of sanctions for not sharing are effective in overcoming the social dilemma. The strong knowledge-sharing values at an organisational level are bolstered by the appraisal system that legitimises the extrinsic motivation used. The workplace environment, with a lowering of hierarchical boundaries in relation to knowledge sharing and job design that promotes knowledge sharing by routinising contributions to shared knowledge bases lead to a heightened sense of community and cooperation, enhancing the value of contributing to a public good. In this case, extrinsic motivators reinforce normative motivators by rewarding in a congruent fashion.

The normative motivation used within professional bureaucracies builds on the underlying professional norms of their members in terms of quality of shared knowledge and propensity to share. This is reinforced by socialisation and opportunities to exchange knowledge at special events (Morris and Empson, 1998, case 6) and through changing the normative frame of middle management from “gatekeepers” to “facilitators” (Pan and Scarbrough, 1998, case 5).

Thus, within the professional bureaucracy, where extrinsic motivators that are congruent with organisational normative motivators and the individual’s motivational preferences, and the application of extrinsic motivators is part of the appraisal system, individuals are more likely to expend the effort to share knowledge for the common good rather than their own gain. This, of course, is underpinned by opportunities to share as well as a facilitating environment, implying that job design also plays a fundamental role.

Case study analysis: operating adhocracies

The cases pertaining to operating adhocracies display traits varying from the professional bureaucracies. First, there is a lower degree of formality and flatter structures, changing the underlying normative stance; second, the work undertaken is more varied, resulting in unique solutions for clients and hence a tendency for higher knowledge augmenting activity. They all exhibit high levels of autonomy and recognition of expertise and achievement.

There is a high congruence of the normative motivation of individuals and that of the organisations in the case studies, which has been achieved partly through recruitment and selection practices. In Swart and Kinnie’s (2003) software development firm (case 4) employees are recruited not only for their expertise, but also because they “fit” with the firm and its knowledge sharing ethos: “Technical ability was not considered the most important element and it was the company’s culture that led the recruitment process” (p. 67). This ensured a high likelihood of normative alignment with both the firm and other employees, enhancing goal congruence. Within the software firm, HRM practices are defined with high participation of the employees and thus legitimated. The appraisal system involves peers and line managers, and knowledge sharing is recognised and rewarded through training opportunities, which are not necessarily work related, further enhancing hedonic motivation for employees’ interests outside the firm. Work design through job rotation, mentoring and responsibility for project leadership assigned by expertise fit rather than hierarchy reinforce normative motivation through socialisation, and hedonic motivation through enhanced self-esteem and autonomy. There is also a sense of challenge and enjoyment in the work: “you will never get bored” (p. 68), again suggesting that work environment and hedonic motivation are significant. These motivators can outweigh financial incentives as the salary rates lie within the industry and location average in a geographical region with opportunities for work elsewhere. This suggests that knowledge is shared as it is seen as a public good and that it both gives opportunities for competence-enhancing rewards and can be competence-enhancing in its own right.
Recruitment plays a similar key initial role in Robertson et al.’s (2003) science-based consultancy (case 2) and legal professional service firm (case 3). Both have stringent practices and recruit on “fit” with the firm as well as expertise, providing normative alignment and a sense of belonging to an “elite”. Knowledge sharing is a core value, and reciprocity is expected. Within the legal professional service firm, this extends to the use of the individual’s external networks. In both cases, the focus of ownership seems to remain with the individual, but the underlying alignment with the firm’s values and sense of identity with the firm overcome sharing issues.

Within Morris and Empson’s (1998) small change management consultancy (case 1), employees are recruited for their expertise and swiftly inculcated with the firm’s way of working, leading to normative alignment. This acts not only at the level of sharing knowledge, which is perceived as a public good, but also at a deeper level: “If you ask people why they work here they will say, ‘because this company believes in the same kind of things that I believe in . . .’” (p.620). Knowledge sharing opportunities are provided both formally and informally, and job design promotes high autonomy. As with the software case, there is a sense that individuals’ hedonic motivation is catered for both by the work itself and by the environment provided. Sharing knowledge is one of the key values of the firm and its members, which is reinforced by benefit at a collective level, underpinned by hedonic motivation.

In the cases looked at, financially based extrinsic motivation does not appear to be a dominant factor influencing knowledge sharing behaviour. For example, in Robertson et al.’s (2003) legal and science-based professional service firms (cases 2 and 3) salary levels are high, but staff are retained even when offered higher salaries outside. This is compensated for by the perception of working for an “elite” firm and extremely comfortable working conditions, reinforcing inherent hedonic motivation. In Morris and Empson’s (1998) change consultancy (case 1) there is a profit sharing scheme based on salary, aligning gain at a firm level and reinforcing cooperation. Common to all the operating adhocracies is the use of professionally aligned training opportunities, funded by the firms, and in Swart and Kinnie’s (2003) case (case 4), of training opportunities not related to the firm but of interest to the individual, further reinforcing hedonic motivation. Appraisal is measured in terms of outcome and in some cases by contribution to the firm’s knowledge through sharing, reinforcing the already high normative motivation for knowledge sharing, changing the focus of the individual from opportunistic to cooperative behaviour. Exceptionally, in Swart and Kinnie’s (2003) case, HRM practices including appraisal are formulated and endorsed by the employees, granting legitimacy to the processes and enhancing a cooperative frame.

All of the operating adhocracies actively promote socialisation through informal meetings and formally through mentoring and job rotation as well as opportunities for knowledge sharing, and provide the basis for these through work design and an enriching environment. Within the operating adhocracy cases, the extrinsic motivators are congruent with the firm’s and individuals’ goals and are concordant with the firm’s underlying ethos of knowledge sharing norms and seek to align with the normative values of the individuals. At a hedonic level, the opportunities for competence building through the tasks themselves and further training, coupled with an enriching and enjoyable environment and job design, suggests...
that alignment of all three motivators leads to effective knowledge sharing. The emphasis on enjoyment of work echoes Amabile's (1997) suggestion that it plays an important role in creative knowledge augmenting activities.

Summary and conclusion

This paper has sought to develop a motivation-based perspective to understand the complex dynamics of knowledge sharing in different organisational contexts. It draws on the theoretical insights of the knowledge-based view of the firm and the transaction cost perspective both of which emphasise the centrality of one particular motivational mechanism in governing the behaviour of organisational members. While the former stresses the crucial role of normative intrinsic motivation, the latter gives a pivotal role to extrinsic incentives. In this paper, the authors propose to bridge the dichotomous view of these two different perspectives by focusing on the motivational processes and the interactive relationships between different motivators. The analysis builds on a three-category taxonomy of motivation, adding a third dimension, “hedonic motivation”, a concept proposed by Lindenberg (2001), to the traditional dichotomy of intrinsic and extrinsic motivation.

The empirical analysis presented in the paper draws on existing case studies gleaned from the literature. The evidence suggests that, within the professional bureaucracy, the social dilemma for knowledge sharing may be overcome through normative motivation, with provision of hedonic motivation supported by extrinsic incentives such as training and career progression. The UK public healthcare sector case (Ferlie et al., 2005), however, demonstrates the inherent dilemma of knowledge sharing in a professional bureaucracy: strong normative motivation for knowledge sharing within uni-professional communities inhibits the transfer of knowledge across communities. Further, extrinsic incentives may “crowd out” intrinsic motivation for knowledge sharing because of perceived diminished autonomy and responsibility within professional groups. In an operating adhocracy where interdependent teamwork is vital, the social dilemma may be overcome through normative alignment reinforced by intensive socialisation opportunities to foster goal congruence. Extrinsic motivators that align with the individual’s hedonic motivation may serve to strengthen the propensity for knowledge sharing. In line with Amabile’s (1997) argument, the analysis shows the critical role of hedonic motivation in stimulating creative and knowledge augmenting activities in an operating adhocracy. In both organisational types, normative and hedonic motivators play a significant role in stimulating knowledge sharing. Financial extrinsic incentives do not appear to be relevant on their own, and may either “crowd out” or “crowd in” other motivators.

Most of the cases looked at in the study were drawn from organisations rooted in the Anglo-American context, and thus care should be taken in extending the findings to other societal contexts. Existing research shows that national cultural (Michailova and Hutchings, 2006) and institutional factors (Lam, 2002, 2008) can powerfully influence patterns of knowledge sharing within organisations. A fruitful line of enquiry for future research would be to broaden the scope of analysis to include organisations from non-Western contexts characterized by different values and knowledge sharing behaviours.

At the theoretical level, the paper highlights the dynamics of interaction among the three motivators, namely, extrinsic, normative and hedonic, suggesting that the nature of their relationships may not be reducible to a clear “yes” (crowding in) or “no” (crowding out) effect. An important insight gained from the analysis is that there is a continuum of relationship between them. Two fundamental questions remain to be explored. First, in what ways do internalisation and socialisation make extrinsically motivated behaviour autonomous and turn it into a “hedonic” form of motivation? And second, to what extent does normative motivation serve as an intermediating variable regulating the relationship between externally regulated incentives/motivators and internally generated hedonic motivation? Future research could integrate further the work of social psychologists with that of socio-economists on incentives and motivation to advance our understanding of knowledge sharing in different organisational contexts.
References


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