Building Organizational Memories:
Will You Know What You Knew?

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Chapter III
Effective Stakeholder Knowledge Sharing for Effective Organizational Memory

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ABSTRACT

This chapter argues that a trusting corporate culture predicated on values that emphasize sharing and encourage interactions amongst stakeholders at all levels spawns knowledge sharing activities and leads to the development of robust organizational memory reserves. The authors argue that the importance of knowledge management in the information age will make it essential that competitive companies inculcate stakeholders with the values necessary to encourage the production, sharing, and storage of knowledge for the benefit of the organization and its stakeholders. The authors demonstrate that having the proper systems and processes in place and fostering a culture that values sharing should help organizations to develop and use latent knowledge reserves. An experiential learning model is used to illustrate how mere data can be transformed into commercially viable knowledge.

INTRODUCTION

According to Hewlett-Packard CEO Lew Platt "if HP knew what HP knows, we would be three times as profitable"(Yang, 2007, p.83). This statement has been echoed and reiterated by CEOs throughout the world that wish to optimize the use of their organization's knowledge bases in order to better serve internal and external stakeholders. This means managing knowledge, information, and data in a manner that meets business objectives efficiently and effectively, despite the dilemmas

posed by the electronic age. IBM CEO Louis Gerstner states that "one of the great conundrums of e-business is that it gives enterprises a powerful new capability to capture and analyze massive amounts of customer information so they can serve individuals more effectively" (Privacy Guru, 2001, p.1). Thus, organizations are faced with a bifurcated problem: On one hand investments in organizational memory systems offer businesses the opportunity to grow exponentially while, on the other hand, information overload challenges the modern manager.

The electronic communications revolution has produced a situation that demands that companies employ better systems and practices to manage this information in order to cope with issues such as information overload while better accommodating customer and stakeholder concerns, such as privacy issues and improved corporate profitability. It is therefore imperative that all organizations aim to develop a culture that is conducive to long-term learning and supports the institutionalization of successful strategies. A static approach to managing external and internal relationships with stakeholders can lead to a business' obsolescence, whereas an approach that emphasizes continual learning and adaptability to meet the ever changing needs of the organization and its external stakeholders can help support the organization's endurance. It is essential that an organization's leaders develop the institutions and culture necessary to ensure that future generations of leaders are better equipped to adapt and respond to external stakeholder needs. This means inculcating employees with values that emphasize the sharing of valuable knowledge and the implementation of systems that enable the creation of various types of organizational memory, and processes to acquire and store this memory. By developing healthy and trusting social networks, designing effective information communications systems such as electronic bulletins and intranets, and having a plan in place to capitalize on these organizational memory systems a company can position itself to succeed in the information race.

This being said, making learning and memory an important part of an organization's relations with external stakeholders cannot be defined in static terms. Acquiring, building, and applying organizational memory in a way that strengthens the organization's relations with external stakeholders and achieves organizational objectives should be treated as an ongoing process that will enable the organization to weather changes in stakeholder relationships—whether the change involves employee turnover or winning a new client. Irrespective, having the proper systems in place and a culture that is open and trusting should help the organization to effectively develop and use innate experiential knowledge for the benefit of the corporation and all its stakeholders.

This chapter argues that all stakeholders can benefit from organizational memory systems that are predicated on a culture that values sharing and learning. It will define both the types of organizational memory that exist and provide an example of one system design that can be used to capture these memories. Additionally, research demonstrating the importance of fostering a trusting and open office environment will be provided to substantiate that trust is the cornerstone of growing healthy social networks, not to mention a prerequisite for knowledge sharing at a more basic level, and thus plays an important role in ensuring effective organizational memory systems. Finally, the chapter will discuss the benefits of these systems to all stakeholders and apply Kransdorff's six-stage experience-based management cycle to demonstrate how experiential learning occurs and organizational memory is amassed (Kransdorff, 2006, pp.124-125). More generally, the complications faced by those who wish to successfully implement an integrated organizational memory plan will be discussed and the nuances involved when designing systems to satisfy the needs of particular stakeholders will be highlighted.

BACKGROUND

Organizational memory falls under the broader topic of knowledge management, which encompasses areas of scholarly research such as organizational learning and has implications for management information systems. All of an organization's memories must be collected, stored and made accessible in order for them to be put to effective use. These memories are either stored in a company's systems (including databases, paper archives and other resources) or in its people, through individual and group memories. Organizational memory therefore plays an important role in every organization, as memory is a prerequisite (or occasionally a barrier) to the successful achievement of organizational goals and the implementation of the organization's strategic plans.

According to Girard (2006, p.23) organizational memories can be subdivided into data, information, and knowledge. Data, which is the most basic building block of an organization's memory, can be defined as "as a set of discrete, objective facts about events" and is normally manifested in an organizational context as "structured records of transactions" (Davenport and Prusak, 1998, p.2, as cited in Girard, 2006, p.24). Given data's quality as the raw material from which knowledge is derived it can be considered the "lowest level in the value chain and by itself is not very beneficial" (Girard, 2006, p.24). Data must be transformed into information, the second form of organizational memory, through one of five processes—categorization, contextualization, calculation, correction, or condensation (Girard, 2006, p.24). Information on the other hand is best described as a "message, usually in the form of a document or an audible or visible communication" (Davenport and Prusak, 1998, p.3 as cited in Girard, 2006, p.24) and must have a sender and a receiver. The last notch in the organizational memory pyramid is knowledge, which can be described as "a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information" (Davenport and Prusak, 1998, p.5 as cited in Girard, 2006, p.24). Knowledge is the most evolved form of organizational memory and has more value, as it is normally applicable without further refinement. Knowledge itself can be described as either being explicit, meaning "formal and specific" and easily communicable (Nonaka, 1998 as cited in Girard, 2006, p.25), or tacit meaning highly personal and difficult to communicate (Takeuchi, 1995 as cited in Girard, 2006, p.25). Tacit knowledge can be analogized to the knowledge gained by the apprentice under the guidance of a master artisan (Nonaka and Takeuchi, 1995, as cited in Girard, 2006, p.26). Thus, collectively knowledge, information and data form the hierarchical system on which knowledge management generally, and organizational memory specifically, rests (Girard, 2006, p.22). In order to organize these memories and eventually make use of them an organization employs organizational memory systems, which better enable the collection, storage, and accessibility of data, information, and knowledge.

According to Olivera, improved organizational memory systems "can buffer the organization from the disruptive effects of turnover (Argote et al, 1990 as cited in Olivera, 2000, p.811), facilitate coordination (Yates, 1989 as cited in Olivera, 2000, p.811), contribute to the development of innovative products (Hargadon and Sutton, 1997 as cited in Olivera, 2000, p.811; Moorman and Miner, 1997), and may even serve to rebuild an organization (Campbell-Kelly, 1996 as cited in Olivera, 2000, p.811)." Further, in the multi-unit organization, such as the multinational corporation or any government, lessons derived from experiential learning efforts that have been collected and stored in one division of the organization can be beneficial to other parts of the organization (Olivera, 2000, p.811). Using experiential learning, or lessons learned through individual

and organizational experiences, is promising for organizations that wish to avoid the redundancy of having to re-learn the same lessons or repeat the same mistakes. An effective organizational memory system can be generalized to benefit all parts of the organization and will necessarily be comprised of "both human and technological components" (Girard, 2006, p.25).

Thus, an organizational memory system can be defined as a set of "knowledge retention devices, such as people and documents, which collect, store and provide access to the organization's experience" (Olivera, 2000, p.815). These systems can be used to "collect solutions to problems, maintain records of exchanges between the organization and its clients, and provide links between people who need and have experiential knowledge" (Olivera, 2000, p.814). Each organizational memory systems has several constituent components, including content, structure and operating processes, all of which must function in unison in order to effectively enable the successful collection, storage, and access of information needed in the achievement of organizational goals (Olivera, 2000, p.813).

The system's structure "refers to how the knowledge it contains is organized" and is defined by the location of its content (or knowledge) (Olivera, 2000, p.816). Indexing and other organizational techniques are therefore essential to allowing internal and external stakeholders to access the information required (Olivera, 2000, p.816). If the organizational memory system consists only of electronic databases of an intranet system then the knowledge will reside wherever it is indexed within the system. If the knowledge is stored in a social network, or an individual with specific expertise, then it is located "wherever the individuals in the network are located" (Olivera, 2000, p.816). This fact makes the use of human based referential organizational memory systems, such as expertise-locator systems (or "ELS") critical in managing knowledge. The quality of the indexing of both electronic resources and social networks is therefore a determinant of the accessibility of the content and the overall effectiveness of the organizational memory system itself (Olivera, 2000, p.816). An effective expertise-locator system can therefore increase the accessibility of the knowledge in question.

Studies have indicated that office workers generally prefer social networks over computer systems when in need of accessing organizational memory. Social networks have been evaluated as more effective given that "people have a natural preference for interacting with other people but also because they have unique features that other memory systems lack" (Olivera, 2000, p.827). According to Olivera (2000, p.827) social networks are "capable of containing multiple types of experiential knowledge and pointers to the location of knowledge in other systems, and of effectively linking dispersed knowledge" in a way that the most sophisticated computer systems have difficulty. People have a unique ability to connect remote and disparate information and explain that information in a manner that no computer can replicate. Utilizing the expertise of others in an office is therefore an important part of organizational memory, though "experts may be under-utilized as a resource if other, less costly, sources are available" (Olivera, 2000, p.827). In Olivera's study (2000, p.823), it was discovered that an overwhelming majority of office workers rated people in their office or other offices as "as effective or very effective (88 per cent and 83 per cent, respectively)" suggesting that co-workers and social networks generally are perceived as being an effective source of knowledge. This compares to only 55% for intranet systems and 54% for electronic bulletin boards used by the survey's respondents (Olivera, 2000, p.823).

The faith that many office workers place in social networks is striking and indicates the importance of having healthy social networks to complement other IT based systems. Irrespective, social networks and computer based systems, the two most important branches of organizational

memory systems, both function in much the same way and serve the same purpose of allowing the collection, storage and access of pertinent information used in the achievement of organizational objectives. On a general level, both social networks and computer-based systems "are similar to repositories or storage bins in that they refer to means by which organizations store experiential knowledge that can be used in decision-making" (Walsh and Ungson, 1991 as cited in Olivera, 2000, p.817). According to Yang (2007, p.87), "the efforts of knowledge sharing may facilitate greater organizational effectiveness" and an "emphasis on organizational learning should facilitate financial performance."

In this light, placing emphasis on the most effective organizational memory systems, especially social networks, may be key to an organization's financial and operational success. Yang's research (2007, p.88) indicates that knowledge sharing and organizational learning make a significant contribution to the overall effectiveness of the organization and that "integration and collection of shared knowledge into organizational assets or capability is necessary and important, in order to proceed to organizational learning." Further, Yang (2007, p.89) states that "knowledge sharing implementation definitely influenced organizational learning at a certain level" in his study providing a strong incentive for organizations to foster the type of environment where this type of sharing is possible. Arguably the construction of viable social networks is a critical part of the organizational memory mix and can influence an organization's success. Knowledge sharing and organizational learning are therefore critical to the development of a healthy organizational memory base.

More strikingly, Robinson and Large (2004, p.49), and others argue that a healthy and well-managed base of organizational memory is a critical factor in managing external stakeholder relations. Though the implications of organizational memory on internal players, such as shareholders and employees, are obvious the implications for external stakeholders (like customers and those with any public interest in the organization's activities) is less apparent. Robinson and Large (2004, p.49) argue that adequate organizational memory systems will buttress a company's ability to meet its obligations to outsiders, such as potential customers who demand that their privacy be respected. Satisfying the needs of external stakeholders, such as customers, could then result in incidental benefits to the organization such as customer loyalty (Robinson and Large, 2004, p.49).

Similarly, Girard (2006) has found that internal stakeholders can benefit from a company's organizational memory systems. It can be argued that healthy organizational memory systems will aid in alleviating the stresses that office workers face daily. This can be achieved by using appropriate indexing techniques to improve accessibility and alleviate information anxiety. Girard (2006, p.22) found that information anxiety depends less on the type of task being performed than on the frequency of the task's performance. Further, a weak positive relationship between tacit knowledge use and information anxiety…" was found to exist, suggesting that is more desirable for managers to operate in the explicit knowledge sphere when possible (Girard, 2006, p.22 & 36). In addition, an effective organizational memory system can reduce the amount of time wasted in locating information. Consider, for instance, that research has shown that in some organizations as much as "43 percent of managers delayed decisions because of too much information" (Wilson, 2001 as cited in Girard, 2006, p.27). An effective organizational memory system alleviates problems such as these that partly result from the existence of information that is largely unstructured or not pertinent to the manager's needs (Girard, 2006, p.27). According to Girard (2006, p.35), "in the longer term, the implementation of a knowledge strategy that emphasizes a culture of knowledge sharing and provides the technology to find and

access information quickly will go some way to reducing the anxiety associated with infrequent tasks."

MAIN THRUST

Issues

The importance of knowledge sharing to organizational memory cannot be underemphasized. However, creating an environment that enables the sharing of organizational knowledge for the benefit of internal and external stakeholders is often a challenge given human tendencies and competitive corporate cultures. The sharing of knowledge is a pillar for the development of a healthy base of organizational memory and is a critical factor in determining the success of social network memory systems. All social networks are reliant on the individual participants, who must be both willing and able to contribute their learned experiences for the benefit of internal and external stakeholders—including co-workers and customers. Considering the postulation that "the competitive basis of the multinational enterprises will increasingly be derived through intangible assets such as knowledge" (Markusen, 1995 as cited in Ensign, 2002, p.152), companies must strive to develop cultures that are conducive to the development of relevant organizational memory bases by encouraging knowledge exchange.

Fostering this type of environment is a considerable challenge according to numerous scholars in the organizational memory sphere. Ensign (2002), among others has identified numerous barriers that can potentially inhibit knowledge sharing and the growth of an organization's memory bases. According to research on R&D scientists working in multinational firms conducted by Ensign, the reputations of individuals and even groups play a critical role in determining the extent to which knowledge is shared. Among members of this sample group, it was "observed that past behaviour and expected action were considerations in making the decision to provide scientific know-how to a fellow R&D employee in the firm" (Ensign, 2002, p.136). Reputation, as defined "in terms of past behaviour and expected action is developed from signals emanating from both the individual and the group" and weighs in on the knowledge source's choice to share or withhold the knowledge in question (Ensign, 2002, p.136). The "source contemplating whether or not to share technological knowledge considers the balance of past transactions and whether the sum of these prior interactions is positive, negative, or zero" (Ensign, 2002, p.136).

Other factors, such as the location of the recipient of the knowledge, were also found to have a bearing on the choice to share knowledge. Pharmaceutical R&D scientists being located in different countries were thought to discourage the flow of tacit technological knowledge (Ensign, 2002, p.136). Other factors, such as being located in the same city, the expertise of the recipient, contribution and uniqueness of sharing (or, in other words, the significance of the contribution) all had a positive impact on knowledge sharing while exchanges that involved greater time and effort, or involving those located in another country had a negative impact on knowledge sharing (Ensign, 2002, p.138). In fact, a correlation was discovered between physical distance generally and the communication of technological knowledge (Ensign, 2002, p.141). As a rule, the greater the distance the less likely it is that the source will share the knowledge with the recipient (Ensign, 2002, p.141).

Further, the "technological expertise of the recipient positively impacted the source's contemplation of whether or not to provide technological assistance" thus demonstrating that "a source may discriminate in choosing whom to help and whom to bypass" (Ensign, 2002, p.142). This factor suggests that the recipient's reputation in the community as knowledgeable lends credence to their request and may even

impact the extent to which the source trusts the recipient. Similarly, other researchers have found that the source's credibility is a "key dimension" in individuals' selection of sources of expertise (Cicourel, 1990 as cited in Olivera, 2000, p.816). In addition, the importance of the knowledge in question was found to bear on the extent to which sharing occurred. The "greater the contribution the technological knowledge was or would have been to the recipient the more frequently it was provided by the source" (Ensign, 2002, p.143). However, where the request involved a contribution that was "too close to home," Ensign (2002, p.143) concluded that there were times when the sharing of information was perceived as a threat to the expert source's "scientific domain." This attitude, which Kransdorff (2000, p.124) refers to as "defensive" in nature, is both stifling to sharing and stifling to the development of a solid base of organizational memory. Sharing existing knowledge saves companies from making the same mistakes twice—it makes "processes efficient" and positively impacts the organization on the whole (Ensign, 2002, p.144).

This being said, this same defensive attitude was exhibited by less senior employees to more senior employees as they were "more inclined to deny assistance to those who were senior" (Ensign, 2002, p.144). Additionally, closer personal and professional relationships were found to increase the competitiveness of R&D scientists. In fact, "it was found that as personal and professional interaction increased (and the relationships themselves became stronger) scientific know-how was less likely to be shared" (Ensign, 2002, p.139). These results are illustrative of the barriers that organizations face in getting employees to work collaboratively, share knowledge, and build trusting relationships. Sadly, "close interaction or familiarity does not promote the flow of scientific know-how…in fact it inhibits it" (Ensign, 2002, p.139). According to Ensign (2002, p.139) his research indicates that familiarity is more likely to breed contempt, not empathy or a willingness to share.

This is further evidenced by the fact that "on average strangers are treated better than known others" and lends support to social exchange theory by "corroborating the *out-for-tat* strategy" – whereby "cooperative actors select members of the network that cooperate (abandoning non-cooperative members)" (Ensign, 2002, p.139). In agreement with social exchange theory, Ensign (2002, p.138) also found that "past behaviour influences the sharing decision." Thus, in order to understand the likelihood of knowledge sharing one must first understand the past behaviour of the recipient and the source and their relationship—including the recipient's reputation, which is defined by the individual's past behaviour and history. The two primary dimensions of interest in determining whether knowledge will be shared therefore include both the recipient's reputation and the expected action that the recipient will take (Ensign, 2002, p.138). From the knowledge source's perspective the recipient's predictability, or "the source's belief about the recipient's future actions…was found to contribute to knowledge sharing" (Ensign, 2002, p.145). The "greater certainty with which the recipient's future conduct could be regarded, the more likely the recipient was to receive technological assistance from the source for the R&D problem that motivated the request" (Ensign, 2002, p.145). The element of trust may be considered a factor as trusting co-workers would likely feel a greater sense of "certainty" that their colleagues would follow through with their actions. Likewise, the existence of healthy bonds between colleagues would diminish the need for predictability—trust is the firmest foundation upon which any relationship can be predicated.

Similarly, reciprocity or "the expectation that the recipient would reciprocate, i.e., give help back to the source, to others in the firm, or even that others in the firm might provide help to the source, weighed in the source's decision to share technological knowledge" (Ensign, 2002, p.140). Actions of reciprocity both increase the perceived

benefits of sharing the knowledge in question and likely produces a more trusting relationship between the professionals. In this light, a "compelling case can be made that the dimensions of reputation, past behaviour and expected action, play a substantial role in exchanges where resources are intangible or for which contracting is costly or difficult" (Ensign, 2002, p.145). According to this analysis, the social mechanisms and psychology that comes into play when sharing knowledge allow for the evaluation of past behaviour and future expectations and may make "exchanges more efficient under certain conditions" (Ensign, 2002, p.145). Thus, an employee's hesitance to share knowledge can be viewed as a mechanism to avoid negative outcomes, such as unbearable costs (in terms of time or energy).

The existence of a trusting relationship may decrease the perceived cost of sharing information or knowledge with a colleague and result in increased utilization of the organizational memory stored in social networks and individuals. Although there are reports of knowledge sharing with acrimonious colleagues, this occurrence is the exception and runs counter to the rule that sources share knowledge with recipients with whom they have trusting relationships (Ensign, 2002, p.147). In the Ensign study, an acrimonious colleague was one who "received the highest scores for being someone who needs to be monitored (is untrustworthy) and is unpredictable and the lowest scores for personal friendship, professional relationship, freely sharing ideas, belonging to a communicative group, and likely to keep promises" (Ensign, 2002, p.147). Ulterior motivations, such as the pleasure and respect derived from sharing one's expertise were identified as reasons for such actions (Ensign, 2002, p.147).

One can conclude that the existence of a trusting relationship positively impacts information sharing by improving the perceived predictability of the recipient and adding an extra incentive to exchange information. This then begs the question, how does an organization improve information sharing amongst individuals and units within the organization?

Solutions

Though it is "not immediately apparent how one might foster such factors as predictability as reciprocity", organizations should strive to encourage these sentiments in order to improve sharing (Ensign, 2002, p.148). Buckley and Casson (1988:38) indicate "to speed up reputation building, it may be advantageous to create…additional opportunities for agents to forbear reciprocally." Buckley and Carter (1999) suggest that expectations deter opportunism; though monitoring is not set aside, the expectation that new knowledge will be provided leads to stable exchange relationships. In other words, by instilling the idea of reciprocity in employees and creating a social contract that values equitable exchanges the organization can encourage the trusting social networks needed to produce dynamic exchanges and build the organization's memory bases. Furthermore, "the burden lies on the recipient to make the sharing of technological knowledge as little work for the source as possible, i.e., reducing the time and effort exerted by the source" (Ensign, 2002, p.149). Reducing the costs of sharing means reducing the cost of accessing valuable organizational memories captured by individual employees and managers. In addition to this, ensuring that organizations choose the right employees, namely those that are willing to share and are competitive at the group (not individual) level (i.e., placing the interests of the organization above incremental individual gains), the company can foster a sense of trust and spur knowledge exchanges. A trusting employee that is a team player is an employee that drives organizational learning and helps in the development of an organization's memory bases (Vera and Crossan 2004).

In fact, Adler (2001) states that economic and organization theory have shown that relative to price and authority mechanisms, trust and reputa-

tion might play an important role in transactions involving knowledge-based assets. A team effort is essential given that entrepreneurial organizations, by nature, must assemble knowledge and information that is "incomplete and dispersed" (Rosen, 1997, p.140). Other authors reiterate the importance of an individual's attachment to the organization. Wenger and Snyder (2000, p.144) state "if members don't feel personally connected to the group's areas of expertise and interest once it has been defined, they won't fully commit." In other words, issues such as trust, personal attachment and belonging may be determinative of whether sharing and learning can occur—whether in a small group or a big organization.

Successful organizations will find ways to bridge individual interests and defensive tendencies in order to maximize the benefits derived from organizational memories that are innately stored in individual stakeholders' minds. The word stakeholder includes customers and suppliers who are an extraordinary source of information that can be used to the organization's benefit. Healthier customer relationships, resulting from the attentive management of customer needs, can yield knowledge-sharing resulting in the improved delivery of products and services (Robinson and Large, 2004, p.61). In addition, it is argued that trusting relationships with customers will also incidentally make the customer relationship more profitable for the business in the long run (Robinson and Large, 2004, p.49).

In the absence of a trusting, predictable relationship, it could be postulated that sharing may occur where the knowledge in question has acquired the quality of property (Eliasson, 1992, p.253). In these circumstances, reciprocity can be viewed as a voluntary exchange of benefits that is based on the expectation of a future return, rather than a purely gratuitous exchange (which may occur in the absence of these benefits). It is plausible that by somehow "proprietizing" the knowledge in question an organization may facilitate knowledge-sharing between employees. This would alleviate the problem faced when a source voluntarily gives up knowledge to a recipient that cannot be expected to return the favour. By moving sharing from the realm of gratuity to the realm of opportunism the organization can circumvent the classic problem faced in knowledge exchanges. That is, knowledge's uncanny "inalienable" quality that requires the clarification of relations between people including terms of kinship (Gregory, 1982). Given that objects of knowledge "are never completely separated from the men who exchange them" (Mauss, 1925, p.31) the sharing of knowledge will always involve a social element. Whether the organization chooses to work with this element by encouraging trusting relationships or minimize this element by proprietizing knowledge sharing, it will always pose a barrier to knowledge sharing and the growth of organizational memory banks on the whole.

Sharing is therefore a critical determinant of the health of an organization's memory systems as sharing is a prerequisite for the collection and access of information. Kransdorff (2006, p.124) has developed a six stage Experience-Based Management Cycle (or EBM Cycle) that encompasses the different processes that an organization must go through in order to collect, store, and access organizational knowledge in order to achieve organizational objectives. This chapter proposes an adapted version of this model in order to demonstrate the process through which mere data and information can be translated into relevant and commercially viable knowledge. The application of this model should be helpful in overcoming the problems associated with deficiencies in knowledge sharing amongst employees. By actively seeking out pertinent organizational knowledge and assembling this knowledge in a useful manner for the benefit of all of the organization's units a company can avoid losing innate knowledge due to office politics. This model contrasts with the aforementioned approach that relies on employees to voluntarily divulge information and share knowledge. By systematically eliciting and assem-

bling a company's knowledge and then integrating it into its organizational memory system some of the difficulties faced by individual employees in accessing knowledge from social networks can be addressed. An active approach is necessary in developing organization memory bases.

The first stage in Kransdorff's model (2006, p.124) involves a *planning stage* to "prune the (organization's) potential learning opportunities down to a manageable size that harmonizes with the organization's perceived requirements." At this stage the organization must determine what knowledge and systems currently exist and where perceived knowledge deficiencies lie. Further, the role that this knowledge plays in the business (relative to operational elements etc.) should be determined. Kransdorff (2006, p.124) recommends the use of knowledge charts, project maps, and employee transit audits in order to achieve this.

Second, the organization must work to "ensure that experiences don't walk out of the front door and that organizational memory, when it is recalled, is not imprecise" during the *knowledge capture* stage (Kransdorff, 2006, p.124). This requires that the organization surveys and collects data and relevant information derived from individual and group experiences. This entails keeping accurate records of difficulties faced and any important lessons learned. Though individuals may naturally capture experiential knowledge and may even share this knowledge voluntarily, as demonstrated by the Ensign study, capturing it for the benefit of the entire workforce is an entirely different challenge. Kransdorff suggests archives (such as databases, intranet systems and electronic bulletins), oral debriefings, and keeping a corporate history to capture knowledge.

Third, a *reflection* phase is required to "make sense of information, extract meaning and relate this to everyday organizational and wider business life" (Kransdorff, 2006, p.124). This entails using the information and data captured to produce commercially valuable knowledge that is reflective of the business' particular goals and circumstances, and involves organizing, adapting or editing the information in a manner that increases the information's relevance and applicability. The reflection stage, as is suggested by its name, requires that the organization both examine itself and the information to better understand how the pieces of the puzzle fit together.

Fourth, a *lessons audit* should be conducted to "allow for the institution-wide fertilization across the organization and down the generations so that learning becomes more corporately based" (Kransdorff, 2006, p.124). This audit should involve some sort of review of existing organizational memories and create a continuity that passes relevant lessons down to future generations and other organizational units. The audit should also filter out items that must be unlearned—namely those attitudes and solutions that are no longer helpful or are even detrimental to the organization's goals. According to de Holan and Phillips (2004, p.1611), "if critical knowledge is forgotten, the competitiveness of the organization is lost and forgetting would have been better avoided". However, "if the forgotten knowledge was extraneous or was actively interfering with the application of more appropriate knowledge, then forgetting was a positive occurrence" (de Holan and Phillips, 2004, p.1611). De Holan and Phillips' (2004, p.1611) argument is that organizational forgetting is an important part of creating an effective organizational memory system given that much of the knowledge that organizations acquire is disruptive to future learning or is of inferior quality. Thus, in some cases it is reasonable for organizations to spend "considerable time…trying to forget something that (is) no longer or never had been functional" (de Holan and Phillips, 2004, p.1611). In other words, forgetting in order to filter out erroneous knowledge and make way for newer improved knowledge is a necessary step.The lessons audit performs this function by filtering and disseminating relevant knowledge across the organization. According to Cicourel (1990 as cited in Olivera, 2000, p.816), this in-

creased filtering affects the recipient's perception of the information's credibility. Despite this, it is an important and necessary part of the entire experiential learning process. Kyriakos and de Ruyter (2004, p.1493) also touch on this subject by noting some of the pitfalls that firms who blindly rely on past knowledge face. According to these scholars, "too much reliance on prior procedures, however, reveals the classic problems as observed in the extant literature; core rigidities' and 'not invented here syndrome' even in the presence of new information from external parties" (Kyriakos and de Ruyter, 2004, p.1493). This leads them to recommend that organizations use "moderate levels of procedural as well as high levels of declarative memory" in order to avoid some of the dangers of relying on old knowledge in the context of product development (Kyriakos and de Ruyter, 2004, p.1493). Kransdorff's (2006, p.124) lessons audit works to filter out inferior memory, both procedural and declarative, and disseminate useful memories throughout the organization.

Lastly, the organization must continually reassess (or *reprocess*) the value of the knowledge it has stored in its organizational memory systems. Further, the organization must *evaluate* its systems and seek to make improvements wherever possible (Kransdorff, 2006, p.124). This means adjusting organizational knowledge to new norms or conditions and assessing its role in light of these changes. According to Kransdorff, by following this process companies apply incremental learning in a way that will yield massive benefits for the entire organization. "If every manager identified just one lesson per month that was translated into a better decision, the collective impact across the organization would be considerable" (Kransdorff, 2006, p.125). More notably, actively collecting, storing, and accessing organizational memory for the benefit of the organization at large may help to deter "defensive" behavior and diminish the problems that it produces.

FUTURE TRENDS

According to Swedish management professor Jonas Ridderstrale (2003, p.27) "we are in the midst of a revolution at least as important as the industrial one" but oddly, "companies are proving slow to respond in terms of restructuring themselves to use, rather than abuse, knowledge" (Ridderstrale, 2003, p.27). Organizations, by nature, are reliant on structures and changing those structures to accommodate organizational learning and the development of organizational memory systems poses a very real challenge to many companies. Further, making the organization flexible enough to adapt when necessary to capture, store and access relevant information is an even greater challenge. Given that "the overall ratio of tangible to intangible resources has shifted", organizations need to learn to apply the same savvy to managing people and ideas as they already do to managing balance sheets and company finances (Ridderstrale, 2003, p.27). This entails moving away from what Ridderstrale (2003, p.27) jokes is "business autopsy" toward "pre-emptive medicine." In other words, organizations need to be proactive is managing their memory systems in order to survive in this age of multinational companies and instantaneous information exchange. The model suggested in this chapter is a good start, but formal structures cannot be success if not accompanied by the right culture and environment. In the future, developing informal social networks and other structures may prove to be critical in order to ensure the sharing of organizational knowledge and the development of memory. In fact, the facilitated growth of so-called communities of practice and other informal social networks has proven to be a defining event in the evolution of modern management practices.

Companies are only as healthy as their people—including their customers, employees, managers, and other stakeholders—and must learn to adopt an approach that values and integrates the

knowledge gained from all these groups. In fact, even Bill Gates has admitted, "if 30 people were to leave Microsoft the company would face bankruptcy" (Ridderstrale, 2003, p.29). In this light, many scholars have advocated the development of communities of practice, social networks, and other social structures to ensure that the transmission and dissemination of knowledge occurs (see Wenger and Snyder, 2000). Though such communities normally evolve organically, without the interference of management, Wenger and Snyder (2000), amongst other scholars, advocate that companies take a more active approach by nurturing these communities. According to these scholars, managers can turn their companies into incubators for communities that spawn learning and act as fountains of organizational knowledge. Wenger and Snyder (2000, p.140) contend "successful managers bring the right people together, provide an infrastructure in which communities can thrive, and measure the communities' value in non-traditional ways." This means creating the precursory conditions for the growth of these communities. For instance by providing the resources and the flexibility to employees who wish to voluntarily organize themselves into communities of practice and then abstaining from interfering with the community (Wenger and Snyder, 2000, p.142-143). Communities of practice, which are already used by many companies but are greatly underutilized, "are informal—they organize themselves" and can facilitate sharing by offering employees an opportunity to discuss both "successes and frustrations" (Wenger and Snyder, 2000, p.142).

For this reason communities of practice and other informal social networks will play a greater role in the future of knowledge management and organizational memory. Though they have always existed in some form, nurtured communities of practice are an important emerging trend given their potential to stimulate sharing and overcome some of the social barriers to learning (Wenger and Snyder, 2000), and are not used nearly as often as they could be. Although Ensign (2002, p.139) concludes that a negative correlation exists between familiarity and the likelihood of sharing know-how, future research would be merited to test if this relationship changes when group members are brought together voluntarily and are bound by trusting, positive relationships. Presumably, the reputations of members of communities of practice would score higher given that these voluntary associations are created with the expectation that participants will engage in reciprocal exchanges of knowledge. Why else could communities of practice have the potential to "radically galvanize knowledge sharing, learning and change" if these factors were not in place (Wenger and Snyder, 2000, p.139).

Further research into the complexities of trust in an office situation would be merited along with research into the "efficacy of the transmission" of know-how (Ensign, 2002, p.146). In addition, a number of serious questions still exist as to how a company can increase reciprocity in knowledge sharing and deter the formation of negative bonds that breed a reluctance to share information and knowledge. This being said, the use of Kransdorff's learning cycle and taking actions that foster a sense of trust amongst employees should prove fruitful in developing robust bases of organizational memory. Finally, Ensign (2002, p.146) also notes the need for more information on the decision process that an individual goes through when deciding whom to contact for assistance. Future research in this area could be helpful in understanding whether the recipient interferes with the knowledge sharing process and the underlying psychology that is determinative of whether exchanges occur. Leaders must understand the psychology of organizational learning and knowledge sharing before they can strategize how to retain organizational memories that are relevant to organizational goals.

CONCLUSION

The information age and globalization has produced a situation where competitive companies can only remain competitive if they learn to manage what they know in a manner that allows them to meet organizational objectives. Given that the "economic value of knowledge is becoming much greater" this skill will become increasingly important in the coming years (Ridderstrale, 2003, p.27). Successful companies will be able to manage what they know to the benefit of all stakeholders, including customers and employees. Overcoming the challenges of knowledge sharing by building an environment that emphasizes trusting relationships and reciprocal sharing, in addition to designing structures that enable the formal elicitation of relevant information and knowledge (such as the model recommended by Kransdorff (2006)), will improve an organization's ability to cope with these challenges. Healthy organizational memory systems, namely social networks and computer systems, are buttressed by knowledge sharing at all levels of the organization. This includes benefiting from interactions with external stakeholders, such as clients and customers, as well as internal stakeholders. More importantly, sharing can be encouraged by choosing the right employees, designing appropriate organizational memory systems, building trusting communities, and encouraging employees to reciprocate when colleagues share knowledge.

As "intelligence and intangibles replace raw materials and capital as the true sources of competitive advantage" organizations will need to learn to better assimilate disparate information, shedding problematic old knowledge in favour of superior knowledge (Ridderstrale, 2003, p.27). A trusting corporate culture that values sharing and provides ample opportunities for such exchanges, as is increasingly being done through communities of practice, will go a long way in promoting the company's efforts to develop and utilize organizational memory. Complementing this atmosphere with technological and social structures that assist in the collection, storage, and access of organizational knowledge will yield benefits to internal stakeholders and external stakeholders alike, who will benefit from more efficient exchanges, greater customer satisfaction, and overall improved productivity and company performance. Constructing an environment that is conducive to the development of organizational memory will prevent firms from repeating past mistakes and separate the winners from the losers in the information economy.

REFERENCES

Adler, P. S. (2001). Market, hierarchy, and trust: The knowledge economy and the future of capitalism. *Organization Science*, *12*(2), 215-234.

Buckley, P. J., & Carter, M. J. (1999). Managing cross-border complementary knowledge. *International Studies of Management & Organization*, *29*(1), 80-104.

Buckley, P. J., & Casson, M. (1988). A theory of cooperation in internationalbusiness. In Contractor, Farok J. & Lorange. Peter (eds.) *Cooperative strategies in international business*. Lexington, MA: Lexington Books.

de Holan, P. M., & Phillips, N. (2004). Remembrance of things past? The dynamics of organizational forgetting. *Management Science*, *50*(11), 1603-1613.

Eliasson, G. (1992). Business competence, organizational learning, and economic growth: establishing the Smith-Schumpeter-Wicksell (SSW) connection. In Scherer, Frederic M. & Perlman, Mark (eds.) *Entrepreneurship, technological innovation, and economic growth: studies in the Schumpeterian tradition*. Ann Arbor, MI: University of Michigan Press.

Ensign, P. C. (2002). *Reputation and technological knowledge sharing among R&D scientists in the multidivisional, multinational firm*. Montreal: Univeristy of Montreal, Unpublished Dissertation.

Girard, John P. (2006). Where is the knowledge we have lost in managers? *Journal of Knowledge Management*, *10*(6), 22-38.

Girard, J. P. (2005). Taming enterprise dementia in public sector organizations. *International Journal of public sector management*, *18*(6), 534-545.

Gregory, C. A. (1982). *Gifts and commodities*. London, UK: Harcourt Brace Jovanovich.

Kransdorff, A. (2006). *Corporate DNA: Using organizational memory to improve poor decision making.* Aldershot, UK: Gower Publishing.

Kyriakos, K., & de Ruyter, K. (2004). Knowledge stocks and information flows in new product development. *Journal of Management Studies*, *41*(8), 1469- 1498.

Mauss, M. (1925/1974). *The gift: Forms and functions of exchange in archaic societies*. London, UK: Routledge.

Moorman, C., & Miner, A. S. (1997). The impact of organizational memory on new product performance and creativity. *Journal of Marketing Research*, *34*(1), 91-106.

Olivera, F. (2000). Memory systems in organizations: An empirical investigation of mechanisms for knowledge collection, storage and access. *Journal of Management Studies*, *37*(6), 811-832.

Privacy Guru Joins IBM. www.crm-forum.com, November 30, 2001, p.1.

Ridderstrale, J. (2003). Cashing in on corporate competencies. *Business Strategy Review*, *14*(1), 27-38.

Robinson, N., & Large, D. (2004). PIPEDA: Impact on CRM and public-private sector interaction. *Optimum Online: The Journal of Public Sector Management*, *34*(4), December 2004, 47-60.

Rosen, S. (1997). Austrian and neoclassical economics: Any gains from trade? *Journal of Economic Perspectives*, *11*(4), 139-152.

Vera, D. & Crossan, M. (2004). Strategic leadership and organizational learning. *Academy of Management Review*, *29*(2), 222-240.

Wenger, E. C., & Snyder, W. M. (2000). Communities of practice: The organizational frontier. *Harvard Business Review*, *78*(1), 139-145.

Yang, J-te (2007). The impact of knowledge sharing on organizational learning and effectiveness. *Journal of Knowledge Management*, *11*(2), 83-90.