INSTILLING A KNOWLEDGE-SHARING CULTURE

By

Heather A. Smith
Hsmith@business.queensu.ca

James D. McKeen
Jmckeen@business.queensu.ca

Queens University School of Business
Kingston, Ontario
Canada
K7L 3N6

Abstract

All organizations have cultures i.e., the sets of norms and values which collectively guide the behavior of their employees. Culture is neither good nor bad but may foster values and behaviors that support or impede certain organizational objectives. In modern organizations, the increasing interdependencies between jobs and the information explosion resulting from interconnectivity and rapid change, mean that many people have pieces of solutions and no one knows it all (Stauffer, 1999). Therefore, cultures which inhibit knowledge-sharing are widely-held to be significant barriers to creating and leveraging knowledge assets. Instilling a knowledge-sharing culture is thus a necessary prerequisite for companies that believe that it is a significant way to differentiate themselves. To explore the characteristics of a knowledge-sharing culture and how one can be nurtured and developed, the authors, in conjunction with Queen's University's Centre for Knowledge-Based Enterprises, convened a day-long focus group of practicing senior knowledge managers from a variety of industries in the United States and Canada. This paper combines their ideas with research from the academic and practitioner literature to create an overview of the issues and practices that are most important to developing a knowledge-sharing culture.

.

All organizations have cultures i.e., the sets of norms and values which collectively guide the behavior of their employees. Culture varies considerably between organizations and is a significant differentiating factor between firms. Within an organization, culture is a powerful force as well, obviating the need for many rules since it encourages employees to behave in certain ways. Culture is neither good nor bad but may foster values and behaviors which support or impede certain organizational objectives.

A "knowledge-sharing culture" is believed to be inherently good because of the growing importance of intellectual capital to organizations and the need for effective knowledge management practices (Gupta & Govindarajan, 2000). In modern organizations, increasing interdependencies between jobs and the information explosion resulting from interconnectivity and rapid change, mean that many people have pieces of solutions and no one knows it all (Stauffer, 1999). Therefore, cultures which inhibit knowledge-sharing are widely-held to be significant barriers to creating and leveraging knowledge assets. Instilling a knowledge-sharing culture is thus a necessary prerequisite for companies which believe that it is a significant way to differentiate themselves.

In order to explore the characteristics of a knowledge-sharing culture and how one can be nurtured and developed, Queen's University's Centre for Knowledge-Based Enterprises convened a day-long focus group of practicing senior knowledge managers from a variety of industries in the United States and Canada. They were asked to explore several questions, including:

- What is your definition/understanding of a "knowledge-sharing" culture? How would you recognize one?
- Would you say that you have a knowledge-sharing culture within your organization?
- What strategies has your organization adopted to instill a knowledge-sharing culture? How successful have these strategies been?
- Have you tried some things that have not worked?
- What are the benefits of a knowledge-sharing culture?
- How long does it take to instill knowledge-sharing as part of the organizational way of life?

In addition, participants were asked to address any other factors and to bring any corporate documents which they considered relevant to this topic. This paper combines their ideas and experiences with research from the academic and practitioner literature to create an overview of the issues and practices which are most important to developing a knowledge-sharing culture. First, it looks at what we know about corporate culture and how it operates in organizations. Then, the characteristics of a knowledge-sharing culture are discussed. Next, cultural change and the factors which specifically nurture a culture of knowledge-sharing are explored. Fourth, knowledge-sharing behaviors and the key factors which motivate or inhibit them are examined. Finally, we identify some practices which have worked to promote knowledge-sharing in other organizations.

Organizational Culture

'Culture' is a term that encompasses the values, attitudes and behaviors of an organization. Organizations are communities of individuals and each enterprise has a distinct culture which describes how people relate to one another (Goffee & Jones, 1996). In other words, as one focus group member described it, "culture is how we do things around here".

Culture is important in organizations because it can powerfully influence human behavior and because it is extremely hard to change (Kotter, 1996). It exerts its influence in numerous invisible ways -- from the kinds of people who get hired, to the types of questions and comments that are tolerated, the formal and informal expectations made of staff, the focus of reward systems, how people interact, and when they ask for help (Gupta & Govindarajan, 2000). As Figure 1 shows, culture is an overarching mechanism in an organization which constrains all other aspects of organizational life and limits what is considered desirable, possible and practical to do. Needless to say, an organization's culture will therefore affect its knowledge management initiatives and will predispose employees towards particular forms of behavior in knowledge-sharing.

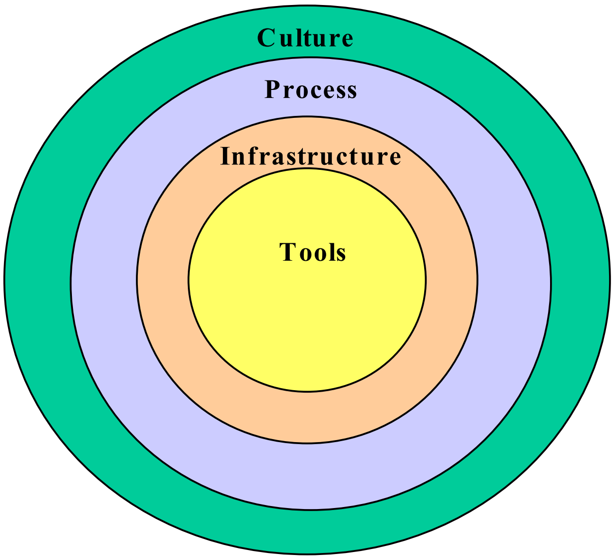

Figure 1. Culture Influences Activities in All Aspects of the Organization

It is unfortunate that very little attention has been paid to date to understanding organizational culture and its role in organizational change. Many organizational leaders have had little or no education in the dynamics of culture and their mechanistic view of how organizations function has left them with a significant "blind spot" where culture is concerned (Kotter, 1996). As a result, academics and practitioners alike are just beginning to learn about its depth and pervasiveness and to experiment with ways to influence it.

As Figure 2 shows, organizational culture does not exist in a vacuum. It is shaped by the social culture in which the organization resides. Thus, a multinational organization's culture may vary somewhat from country to country. Similarly, while it shapes them, organizational culture does not completely define the cultures of different business units or functional units. As a result, an R& D function may have an observably different culture from sales and marketing. Furthermore, culture is dynamic. It changes over the life of an organization as it moves from start-up to maturity and it changes over time (although not always in ways leaders understand or can manipulate), much as our societal culture does. Therefore, what is meant by "culture" can be difficult to pin down and this makes it challenging for leaders to work with.

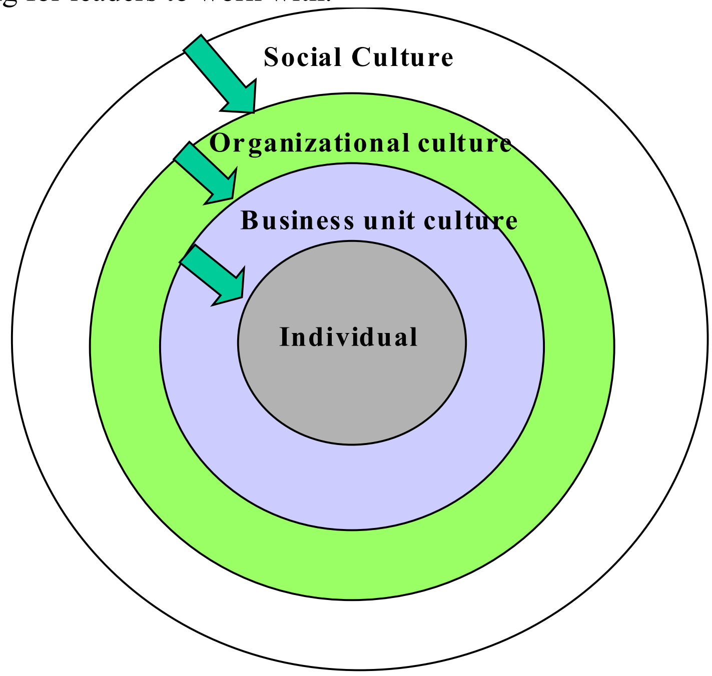

Figure 2. Culture operates in many different spheres, each constraining those within it.

Focus group members and academics alike are agreed that before a cultural change such as knowledge-sharing, can be effected, an organization's current culture must be understood. All organizational cultures tend to vary along two dimensions: sociability and solidarity. These dimensions capture much of what we know about organizational culture (Goffee & Jones, 1996). *Sociability* refers to the emotional and non-instrumental relations which exist within an organization, i.e., the friendliness among members of a community. Sociability makes work enjoyable, fosters teamwork, promotes information sharing, and creates an openness to new ideas. *Solidarity* refers to the degree to which members of an organization share goals and tasks. It makes it easy for them to pursue shared objectives quickly and effectively, regardless of personal ties and generates strategic focus, swift response and a strong sense of trust. By combining these two dimensions, an organization's culture can be characterized as one of four types (see Figure 3). Each type has its strengths and weaknesses and one is not better than the other, e.g., university business schools tend to have effective fragmented cultures. Wherever an organization is along these two scales represents a starting point for understanding its culture and how and why managers might wish to change it. As we will see below, certain types of organization cultures tend to be more effective at promoting knowledge-sharing than others (further characteristics of these cultural types are given in Appendix A).

A Knowledge-sharing Culture

Today, knowledge-sharing is widely-held to be inherently necessary to the health of most enterprises. Research shows that a "willingness to share" is positively related to profitability and productivity and negatively related to labor cost (Jarvenpaa & Staples, 2000). Focus group members believed that knowledge-sharing is positively linked to growth and innovation, bottom line savings, increased customer satisfaction, increased shareholder value and learning.

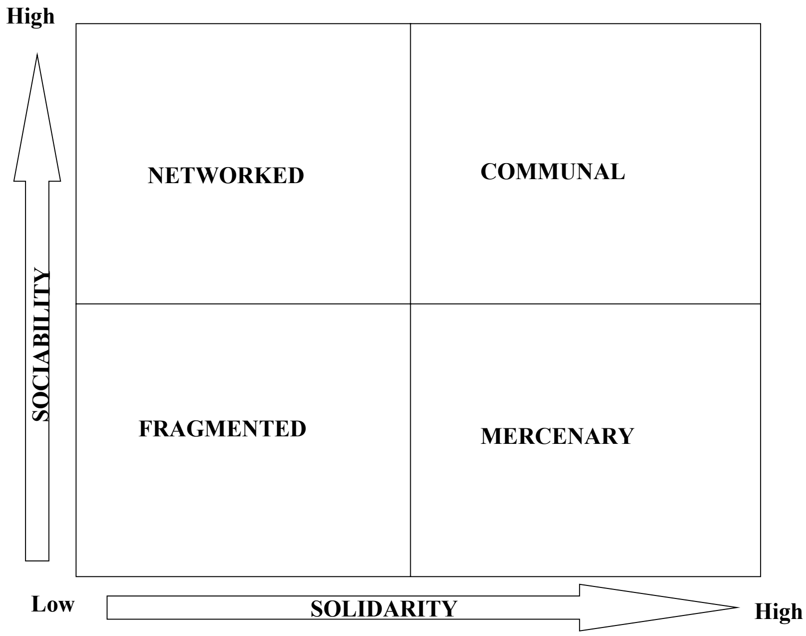

Figure 3. The Four Basic Types of Organization Culture

(after Goffee & Jones, 1996)

Participants described a knowledge-sharing culture as one where people share openly, there is a willingness to teach and mentor others, where ideas can be freely challenged and where knowledge gained from other sources is used. Knowledge-sharing can occur through many different media: conversations, meetings, processes, best practices, data bases, and questioning. Ideally, participants stated, knowledge-sharing should be a corporate value which defines how work gets done and how everyone thinks. In short, a culture of knowledge-sharing goes deeper than superficial individual behaviors and captures the hearts and minds of the people in an organization.

There is wide agreement that most organizational cultures currently act as barrier to knowledge-sharing and need to change to become more supportive of it (Gupta & Govindarajan, 2000). There are four key reasons why culture is seen as being at the base of how well knowledge is shared (Delong & Fahey, 2000):

1. Culture shapes people's assumptions about what knowledge is important.
2. Culture determines the relationship between levels of knowledge, i.e., what knowledge belongs to the organization and what to an individual.
3. Culture creates a context for social interaction about knowledge, e.g., what is sensitive, how much interaction or collaboration is desirable, which actions and behaviors are rewarded and punished.
4. Culture shapes the creation and adoption of new knowledge.

Focus group members characterized the industrial age culture in which most of our organizations are steeped as being strongly antagonistic to knowledge-sharing. In this type of culture, knowledge is considered to be power, so information hoarding is the norm. Management operates on a need-to-know basis and actively promotes a culture of secrecy. The "not-invented-here" syndrome is rife and rewards are based on individual contributions. The challenge for today's leaders is therefore to evolve from such a culture to one which actively encourages and facilitates knowledge-sharing and discourages industrial age thinking and behaviors.

Cultural Change in Organizations

We know very little about how to effectively change an organization's culture and even less about how to promote a knowledge-sharing culture (Connelly, 2000; Kotter, 1996). We do know that cultural transformations take time and effort. Change is a process that must be measured in years, not weeks or months. Many organizations make the fatal mistake of not paying enough ongoing attention to culture once change efforts appear to be succeeding. Change guru John Kotter (1996) writes, "Changes in a work group, a division or an entire company can come undone, even after years of effort, because the new approaches haven't been anchored firmly in group norms and values."

Cultural transformation also involves significant amounts of communication. To motivate people to change, there must be a compelling vision which is clearly linked to the organization's strategy and ongoing management attention to how well the change is occurring. If the value of a change to an organization is not clearly articulated, it is likely to fail. This is especially important when promoting a knowledge-sharing culture since it may on the surface appear to have fewer tangible benefits. Sir John Browne, CEO of British Petroleum, believes that vision and strategy are absolute prerequisites of the shift to knowledge-sharing because they clearly focus efforts on what is important to the company (Proekesch, 1997).

Visible, high level support for cultural transformation is essential (Kotter, 1997). Focus group members repeatedly stressed that passionate leadership and management which leads by example are the best ways to effect change. As one stated, "the principle role for the leader is to make knowledge-sharing so attractive that people *want* to be part of it." This is the message at General Electric where knowledge-sharing is one of three organizational initiatives for which CEO Jack Welch, takes personal responsibility (Stewart, 2000).

It is important to recognize that a knowledge-sharing culture will look and feel differently from one organization to the next. Kotter (1996) suggests that this is because cultural changes should be considered as *grafts* of new values and behaviors on to the old corporate culture. Ideally, a firm will retain the strengths of the old culture and bear the fruits of the new one. Thus, there is no single set of knowledge-sharing characteristics for which every organization should strive. However, there are three sets of underlying organizational attributes which appear clearly associated with knowledge-sharing cultures:

1. **Companies with a high solidarity *and* high sociability culture.** High sociability strengthens the relationships needed to express and accept creative thinking and creates an environment where people are more likely to go beyond the formal requirements of their jobs. It also encourages helping and sharing behavior. High levels of solidarity help people to sustain their focus. It builds a sense of trust based on merit and enables swift, cooperative responses to competitive threats. In industries where the business environment is dynamic and complex and which have multiple external connections, high sociability, high solidarity organizations have a better chance of being able to synthesize and use information from a variety of sources (Goffee & Jones, 1996).

2. **Companies which emphasize fair processes as well as fair outcomes.** Organizations have traditionally sought to have fair outcomes for their staff regarding such things as compensation or position in the corporate hierarchy. The expectation is that when people get what they deserve, they will feel satisfied with the outcome and fulfill their obligations to the firm. Management tools have therefore emphasized such fair outcomes as, resource allocations, economic incentives and rewards, performance evaluation. However, recent research is consistently finding that there is an important link between the perceived fairness of an organization's *processes* and the attitudes and behavior which result. Fair processes involve individuals in the decisions that affect them, ensure that everyone affected understands why final decisions are made as they are, and clearly state future expectations. In organizations where fair processes are perceived, staff voluntarily go above and beyond the call of duty. One study found that "Managers who believed the company's processes were fair displayed a high level of trust and commitment, which in turn engendered active cooperation. Conversely, when managers felt fair process was absent, they hoarded ideas and dragged their feet." (Kim & Mauborgne, 1997) Thus, fair processes are an important means of instilling a commitment to knowledge-sharing in an organization.

3. **Companies which recognize their employees' work.** Organizational citizenship behavior is the term used to describe a host of work-related helping behaviors above

and beyond a prescribed job. It has been shown to relate positively to group cohesiveness, teamwork, performance, problem solving and problem prevention. Recent research has demonstrated that staff whose work is recognized by their superiors and/or their peers will tend to demonstrate stronger organizational citizenship behaviors than others (Podsakof, 1997). Significantly, recognition does not have to be monetary recognition but can also include non-monetary rewards such as extended vacations, tickets to a sports event, an award, or a thank you note. Paré et. al. (2001) have found that such recognition practices increase perceptions of procedural justice which in turn make staff more likely to engage in organizational citizenship behavior.

Motivators and Inhibitors of Knowledge-sharing Behavior

While organizations should strive to embed knowledge-sharing in their culture in the ways discussed above this is, as we have noted, a long-term process. In the short and medium term, much of a knowledge manager's efforts therefore need to be focused on ways to promote knowledge-sharing *behavior*. While behavior is the most superficial aspect of culture, experts believe that effective transformation efforts should aim to produce a series of visible short-term impacts in a number of different parts of an organization. This makes the benefits of change real for people and shows them how specific new behaviors and attitudes help performance (Kotter, 1996). Many focus group members are using this approach to promote knowledge-sharing. "The key is to build islands of sharing", stated one member, "and then to build bridges between the islands." Because cultural change is such a long-term, multi-step process, it is not unusual to find that knowledge-sharing efforts are incubated first in small niches in an organization before gaining widespread senior management attention and support. The experts agree with this approach, emphasizing that cultural transformation is a non-linear process and that culture will only change *after* people's actions are altered, *after* benefits have been observed for some period of time and *after* people have seen the connection with the change (Kotter, 1996). Therefore, motivating knowledge-sharing behaviors is an important first step to instilling a full-blown knowledge-sharing culture.

There are four categories of factors: social, managerial, organizational and technical, which stimulate or inhibit knowledge-sharing behavior. Ideally, they build on and interact with each other to create optimal conditions for knowledge-sharing (see Figure 3):

1. **The Social Context of Knowledge-sharing Behavior.** Most knowledge is shared socially. Research shows that managers get two-thirds of their information from face-to-face meetings or via the telephone and only one-third from documents (Davenport, 1994). People are five times more likely to turn to friends and colleagues for answers to their problems rather than to other sources of information (Cross & Baird, 2000). Yet while we know that personal contact is a fundamental part of knowledge-sharing, "too often knowledge transfer has been confined to such concepts as improved access, electronic communication, and

document repositories." (Davenport, 1994). Practitioners know this well but although "no one says 'document repositories', that's where we spend 100% of our resources."

The social context in which individuals work appears to form the bedrock for all other types knowledge-sharing behaviors. People will not share with those they don't trust either by reputation or expertise. They need to size up who is giving the information and assess their credibility (Connelly, 2000; Davenport, 1998). This is one key reason why technical knowledge-sharing solutions often work.

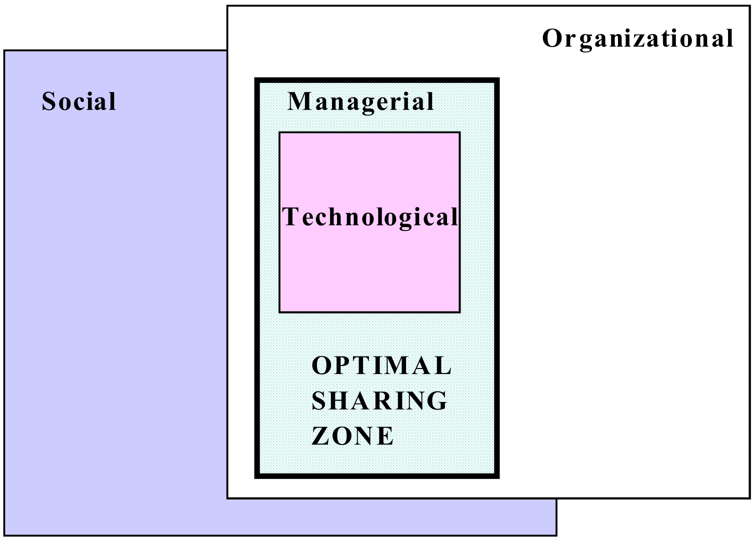

Figure 4. Optimal Sharing Behaviors Occur where Social, Organizational & Managerial Factors Intersect

poorly on their own. Organizations therefore need to develop specific strategies to increase spontaneous exchanges between individuals. Some of the factors which have been shown to increase knowledge-sharing between people include: introducing new staff members to key people in the organization; developing a team-based structure on which a sense of community can be built; rotating key staff through the organization to build networks; locating work areas so they intersect with others; and cultivating an atmosphere of informality where people feel comfortable asking others for help (Goffee & Jones, 1996; O'Dell, 1999; Stewart, 2000).

There appear to be two sets of conflicting assumptions about why people do or do not share their knowledge. The first is that researchers feel that knowledge-sharing is not 'natural' and therefore needs to be motivated (Tan, 2000; Davenport, 1994) while focus group members felt that sharing will occur naturally if organizations remove the barriers that they put in place to prevent it happening. In fact, both are likely true. Jarvenpaa and Staples (2000) have found that organizational and managerial factors have a great deal of influence on how much knowledge-sharing individuals in organizations do. For example, people who believe information belongs to the organization are *less* likely to share than those who feel the information is their own. Information sharing is also more likely to occur if there is more interdependence of job tasks.

A second assumption is that people don't want to share because they are overloaded with information already. Again, this is both true and untrue. When people have job assignments which leave them isolated, allow for little slack time or which do not support such 'unproductive' activities as talking or reading, it is highly unlikely that they will be able to find time to share (Davenport, 1998). On the other hand, Davenport (1994) believes there is no such thing as information overload. "If information is really useful, our appetite for it is insatiable." This underscores a point which was continually made during the focus group meeting. Knowledge must be useful if sharing is to occur, that is, if information is to be both sought and utilized. Individuals set internal criteria for what they believe is important. Any knowledge-sharing effort must therefore be designed around these (Hickins, 1999).

2. **The Organizational Context of Knowledge-sharing Behavior.** Organizational processes and practices form a second major category of factors which influence knowledge-sharing behaviors. These factors include: recognition and incentives; the role of information in the organization; governance and accountability structures; where knowledge resources are spent; and how the organization's processes integrate knowledge. Research has repeatedly shown that organizational demographics, particularly large size and formal status differentials, have a negative influence on knowledge-sharing (Connelly, 2000; Stauffer, 1999). Focus group members identified many policies and practices which mitigated against knowledge-sharing. For example, some firms reward individual achievement not group achievement or use metrics that do not track knowledge-sharing activity. In other organizations, concerns over keeping key information from falling into competitors' hands have led to such restrictive security procedures that they also inhibit internal knowledge-sharing. Particularly endemic is a persistent industrial-culture belief that knowledge is power and money. Until this belief is rooted out and destroyed in all processes and practices of the organization, knowledge-sharing will not occur, regardless of how well the organization promotes it (Davenport, 1994).

   Practices and processes embed what the organization values. Two of the most important organizational practices which promote knowledge-sharing behavior are: rewards and recognition and monitoring. As noted above, reward and recognition practices can either promote or inhibit sharing behaviors depending on how they are designed. One focus group organization encourages sharing by allocating 25% of an individual's performance evaluation to how well they share and use knowledge. This not only rewards desired behavior, it provides a means for monitoring it as well. Other organizations use more informal recognition practices, e.g., thank yous or awards, and find that these work as well as more formal means.

Training is another process which can significantly influence knowledge-sharing and which is often under-emphasized. Often workers do not use knowledge-sharing technology and tools simply because they are not sure how they work or do not understand what behaviors they are expected to practice (Davenport, 1994; Connelly, 2000). CKOs in the focus group noted that in their experience the amount of training needed to change behavior is always underestimated. Some firms have implemented formal mentoring and coaching programs to address this need.

Facilitation of knowledge-sharing work is also important. Strategies for making information useful and accessible are all labor intensive and require knowledge and judgement. Organizations must be prepared to provide adequate resources to support the knowledge-sharing they desire (Davenport, 1994). One focus group firm has created the position of "knowledge steward". The steward is involved in all major projects, gathering relevant business intelligence and template documents at the beginning and capturing what was learned on a project at the end. Another organization legitimizes time spent documenting knowledge and mentoring others, cycling specialists into knowledge management roles between assignments.

Care must be taken when designing knowledge-sharing procedures, documents and methods however, that they do not become too complicated. The more complex and detailed these are, the less likely they will be to change behavior (Davenport, 1998). This is one reason why enterprise-wide information architectures have been a resounding failure.

3. **The Managerial Context of Knowledge-sharing Behavior.** Motivating cooperative behavior in staff has been called one of the key managerial issues of the next few decades. This is because "creating and sharing knowledge are intangible activities that can neither be supervised nor forced out of people. They happen only when people cooperate voluntarily" (Stauffer, 1999). Focus group members agreed that managers play an important role in stimulating or inhibiting knowledge-sharing. Middle and line managers have a great deal of influence on how organizational processes are carried out (i.e., how fairly they are perceived) and on how well sociability and solidarity are promoted within their area of influence (Schein, 2000).

Management plays an especially critical role in leading knowledge-sharing efforts by example. Focus group members consistently stressed the importance of leaders in communicating the importance of knowledge-sharing and of practicing what they preach. Furthermore, it is managers who must sanction the time for training and sharing, who determine job assignments which can optimize or stunt learning, who must recognize and reward the sharing behaviors the organization wishes to inculcate, and who decide who to hire and promote.

They also have special responsibilities for delivering value. As we have noted, delivering visible value is a key aspect of motivation. Managers must focus knowledge management initiatives on the things that matter most to people, tailoring them to how people do their jobs and to the social dynamics of their organizational unit (Hickins, 1999).

Given these key roles in motivating knowledge-sharing behavior, it is unfortunate that surveys have shown that only 43% of business managers (including executives) have a clear understanding of the value of knowledge management (Eckhouse, 1999). "There is no substitute for someone who really believes", stated one focus group member. Continuous communication by management about the importance of knowledge-sharing is essential to the development of this behavior (Philips, 1999). Communication includes not only speaking and writing but also what management pays attention to. One company where management was very successful in doing this was Nucor, a steel manufacturing company in the United States. Several years ago, managers set out an integrated program to mobilize knowledge in their plants. This combined improved training and higher quality standards with an emphasis on respect and trust for the workers. When sacrifices had to be made, managers sacrificed as much or more than the workers. All performance data were shared with a plant's workers and suggestions for improvement were carefully considered. Interplant performance data were also shared and the best workers from each were rotated between plants to seed knowledge-sharing. Meetings and visits between plants were also arranged. Finally, higher bonuses and other incentives were added to further drive home the message. As a result of these efforts, although in a fundamentally troubled industry, Nucor has consistently returned higher than average profits and return to its shareholders (Gupta & Govindarajan, 2000).

4. **The Technical Context of Knowledge-sharing Behavior.** The last, and probably least important motivator of knowledge-sharing behavior is technology. As Davenport explains, "The world is littered with the remains of knowledge management programs that companies built and then nobody came." (O'Dell, 1999). There is an important and synergistic relationship between IT and knowledge management. IT makes the connections possible that enable sharing, but in and of itself does not motivate it. In fact, implementing technology while disregarding the other factors which motivate knowledge-sharing will only reinforce existing behavior (Davenport, 1994). At best, technology should be seen as complementing other knowledge management activities; at worst, it can be downright offputting (Cross & Baird, 2000; Hickins, 1999).

In spite of these facts, it is knowledge-sharing technology which gets the lion's share of attention and resources, possibly because it is IT people who are more likely to understand the importance of knowledge management – even if they have an overly mechanistic view of how it is done (Eckhouse, 1999). However, all too often its intended users are unaware of a technology's existence or don't know how to use it effectively (Connelly, 2000). Other problems with technology include:

- **Poor design.** Frequently, technology is not designed for the work people actually do but rather for the work technologists *think* they should do (Hickins, 1999).

- **Poor usability.** People will only use technology if it provides: an easy way to locate the information they need; effective interfaces; and quality service delivery (Griffiths, 2000).

- **Failure to match the medium with the message.** Technology can be an effective way to speed information around an organization – especially if it is geographically dispersed. However, it is not a very rich medium. For deeply contextual, tacit information, the best way to share can be using technology to connect people to experts and then let them exchange information offline (Drucker, 2001).

- **Lack of segmentation.** Not all users of knowledge resources have the same needs. Recognizing this, one of the focus group companies created a "killer app" by developing "PowerPacks" of information, specifically designed for particular groups in the company.

In short, technology design for knowledge-sharing requires careful attention to the social, organizational and managerial factors which drive behaviors. Only then, can technology be effectively implemented to support and enhance those parts of knowledge-sharing behavior which are amenable to technical facilitation.

Effective Knowledge-sharing Practices

While it is not always possible to translate best practices from one organization to another, members of the focus group shared some ideas which had worked well for them:

- **Sell knowledge-sharing.** Often, people see knowledge management as a time-consuming add-on and don't see the benefits for themselves of doing the extra work required. The sales-pitch will be different in different organizations. Some firms need to appeal to individuals' self-interest; others sell the organizational benefits; some don't even call it knowledge-sharing – they call it "working smarter".

- **Use a Knowledge Leadership Cue Card.** To remind its managers about the importance of their own behavior in stimulating knowledge-sharing, one firm created a cue card listing ways they can promote it in their day-to-day jobs. This card includes such reminders as: "what have you learned from this project?" and "who else have you shared this with?”. The complete cue card has been included in Appendix B.

- **Incorporate Testimonials.** Stories of the success of knowledge initiatives have long been considered important ways to focus attention on knowledge-sharing. Focus group members strongly encourage users who have seen the value of sharing to speak about it with others. Many also include testimonials in the rollout of any knowledge management initiative.

- **Measure Sharing**. As with all changes, measuring knowledge-sharing shows that management believes it is important. Companies need to identify these types of metrics in addition to traditional outcome metrics. Some of the aspects of knowledge-sharing success which focus group companies are measured include: rate of contribution to knowledge data bases; rate of knowledge reuse; quality of knowledge available; and external recognition of the firm’s knowledge leadership.

- **Get the value proposition right.** Understanding and articulating the ways that knowledge-sharing links to value is absolutely critical according to the focus group. Often, this does not have to be at an enterprise level but in smaller areas where knowledge can have an immediate impact. In one company, sharing efforts were focused on providing added value to its customers; another on making its customer service operators more effective; and another on its office workers. A “focused and pragmatic” effort is the best place to start stimulating knowledge-sharing.

- **Recognize the stages of knowledge-sharing.** As we have noted above, instilling a knowledge-sharing culture is a multi-step process and firms need to recognize when they are ready to move on from one stage to the next. The first stage is when knowledge-sharing is still a new concept. At this level, sharing must be tactical focussing on ensuring that front line workers have the information and contacts necessary to do their jobs well. Instilling knowledge-sharing at this level could include: producing contact lists, providing more accessible standard information online, and encouraging inter-group communication and feedback. When a firm recognizes that it needs to do more and is ready to invest further, then more emphasis should be placed on ensuring that both organizational processes and managers support knowledge-sharing behavior through such things as, training, incentives, infrastructure, usability, and focusing on value-adding activities such as integrating knowledge management tools and techniques into business processes and practices. Finally, when knowledge becomes a true corporate competency, organizations can focus on the more strategic, enterprise-wide sharing of knowledge. This involves embedding knowledge into every aspect of the company’s work and culture. It is only at this level that the organization will truly be exploiting what it knows and will be considered to have a mature knowledge-sharing culture. At *minimum*, focus group members stated, this progression is a three to five year process which cannot be rushed and which must be constantly monitored.

Conclusion

Instilling a knowledge-sharing culture is a challenge for even the most knowledge-savvy organizations. Because culture is difficult to pin down, it is often underestimated in efforts to change how firms work. This is a mistake. Developing a culture which values and practices knowledge-sharing is a multi-year effort involving attention to the social, organizational, managerial, and technical components of this behavior. Past efforts have often assumed that implementing technology alone will be enough to promote knowledge-sharing. While this has been consistently demonstrated as an ineffective practice, frequently the majority of an organization's knowledge resources are devoted to technology and not to the other factors which stimulate knowledge-sharing. Until organizations make a concerted effort to refocus their efforts on these, they will find it extremely difficult, if not impossible to grow a true knowledge-sharing culture.

References

Cross, R and L. Baird. "Technology is not enough: improving performance by building organizational memory", **Sloan Management Review**, Spring 2000, V.41, No. 3, pp. 69-78.

Connelly, C. "Predictors of knowledge-sharing in organizations", unpublished Master's Thesis, August 2000, Queen's School of Business, Queen's University, Kingston, Ont.

Davenport, Thomas. **Working Knowledge**, Harvard Business School Press, Boston, 1998.

Davenport, T. "Saving IT's soul: human-centered information management", **Harvard Business Review**, March-April, 1994, pp. 119-131.

DeLong, D. and L. Fahey. "Diagnosing cultural barriers to knowledge management", **The Academy of Management Executive**, November, 2000, V. 14, No. 4, pp. 113-127.

Drucker, D. "Knowledge management: theory doesn't equal practice", **Wall Street & Technology**, January 29, 2001.

Eckhouse, J. "Sharing knowledge isn't easy yet", **Informationweek**, April 16, 1999, p. 99.

Gates, W. **Business @ the Speed of Thought**, Warner, New York, 1999.

Goffee, R. and G. Jones. "What holds the modern company together?", **Harvard Business Review**, November-December, 1996, pp. 133-148.

Griffiths, J-M. "Social, behavioral and ethical factors", **Bulletin of the American Society for Information Science**, Dec. 1999-January 2000, V. 26, No. 2, pp. 21-22.

Gupta, A. and V. Govindarajan. "Knowledge management's social dimension: lessons from Nucor Steel", **Sloan Management Review**, Fall 2000, V. 42, No. 1, pp. 71-80.

Hickins, M. "Xerox shares its knowledge", **Management Review**, September 1999, V. 88, No. 8, pp. 40-45.

Jarvenpaa, S. and D. Staples. "The use of collaborative electronic media for information sharing: an exploratory study of determinants", **Journal of Strategic Information Systems** 2000 (9), pp. 129-154.

Kim, W. and R. Mauborgne. "Fair process: manageing in the knowledge economy", **Harvard Business Review**, July-August 1997, pp.65-75.

Kotter, John. **Leading Change**, Harvard Business School Press, Boston, 1996.

O'Dell, C. "Knowledge transfer: discover your value proposition", **Strategy and Leadership**, Mar/Apr 1999, V. 27, No. 2, pp. 10-15.

Paré, G., M. Tremblay, and P. Lalonde. "The role of organizational commitment and citizenship behaviors in understanding relations between human resources practices and turnover intentions of IT personnel", **MIS Quarterly** (forthcoming, 2001).

Philips, T. "The truth about sharing knowledge", **Director**, July 1999, V. 52, No. 12, p. 75.

Podsakoff, P.M., Ahearne, M. and MacKenzie, S.B., "Organizational Citizenship Behavior and the Quantity and Quality of Work Group Performance", *Journal of Applied Psychology*, 82, 1997, pp.262-270.

Proekesch, S. "Unleashing the power of learning: an interview with British Petroleum's John Browne", **Harvard Business Review**, September-October 1997, pp. 5-19.

Schein, E. "Don't make culture another item on the KM checklist", **Knowledge Management Review**, September-October 2000, V. 3, No. 4, pp. 8-9.

Stauffer, D. "Why people hoard knowledge", **Across the Board**, September 1999, V. 36, No. 8.

Stewart, T. "The house that knowledge built", **Fortune**, October 2, 2000, pp. 278-280.

Tan, J. "Knowledge management – just more buzzwords?", **The British Journal of Administrative Management**, Mar/Apr. 2000, No. 19, pp. 10-11.

Appendix A

Characteristics of the Four Basic Organizational Cultures

(from Goffee & Jones, 1996)

1. Networked (high sociability; low solidarity)

- Informal
- Much at work and after hours socializing
- Many ways to get around the hierarchy
- Difficult to get functions or groups to cooperate
- Political atmosphere
- Hare to agree on and enforce priorities
- Difficulty gaining adherence to procedures, rules, systems and measures

2. Fragmented (low sociability; low solidarity)

- Low consciousness of organizational membership
- Members identify with professional groups
- High levels of dissent about strategic goals
- Attractive to individuals who prefer to work alone
- Often associated with virtual organizations.

3. Mercenary (low sociability; high solidarity)

- Most communication is business-focused
- Can respond quickly and cohesively to a perceived threat
- Priorities are decided quickly and enforced with little debate
- Generally intolerant of poor performance
- Low levels of loyalty
- Individuals are disinclined to cooperate

4. Communal (high sociability; high solidarity)

- Typical of small organizations
- High value on fairness and justice
- Clear understanding of goals and competition
- An inherently unstable form.

Appendix B

A Knowledge Leadership Cue Card

Leaders can model desired behaviors by sharing information and knowledge with others inside and outside of the leader's immediate organization and by:

- Asking colleagues, "Who else have you shared this with?"
- Asking colleagues, "Who else could make use of this information?"
- Asking colleagues, "What have you learned from this project or activity?" and "Who have you shared these learnings with?"
- Prior to approving a new project or initiative, asking the project leader, "What have you learned about what the organization has done in this area in the past? In other parts of the business?" "How are you leveraging these learnings?"
- Asking colleagues and project teams, "Have you checked our knowledge bases to see what we know about this topic?" "What have you learned as a result of checking our knowledge base, and how do you plan on building on this knowledge in your project?"
- Asking colleagues and project teams, "Who are the experts in this topic inside or outside the company?" "Have you discussed this with those experts? If so, what have you learned? If not, why not?"