# New Perspectives on Rewards and Knowledge Sharing



**Gee-Woo (Gilbert) Bock**
*National University of Singapore, Singapore*

**Chen Way Siew**
*IBM Consulting Services, Singapore*

**Young-Gul Kim**
*KAIST, Korea*

## INTRODUCTION

Of the 260 responses from a survey of European multinationals, 94% believed that knowledge management requires employees to share what they know with others within the organization (Murray, 1999). Among the processes of knowledge management—creation, sharing, utilization and accumulation of knowledge—sharing is what differentiates organizational knowledge management from individual learning or knowledge acquisition.

However, the process of sharing knowledge is often unnatural to many. Individuals will not share knowledge that is regarded to be of high value and importance. In fact, the natural tendency for individuals is to hoard knowledge or look suspiciously at the knowledge of others. Thus, incentive schemes—where employees receive incentives as a form of compensation for their contributions—are common programs in many organizations. Such schemes have met their fair share of success as well as failure in the field of knowledge management. On the one hand, the carrot and stick principle used in Siemens' ShareNet project turned out to be a success (Ewing & Keenan, 2001). On the other hand, the redemption points used in Samsung Life Insurance's Knowledge Mileage Program only resulted in the increasingly selfish behavior of its employees (Hyoung & Moon, 2002).

Furthermore, despite the plethora of research on factors affecting knowledge sharing behavior, little concerns discovering effective ways to encourage individuals to voluntarily share their knowledge. Early studies on knowledge management began by trying to discover key factors pertaining to knowledge management in general, instead of knowledge sharing in particular, as summarized in Table 1. Although research on knowledge sharing started around the mid 1990s, it focused mainly on knowledge sharing at the group or organizational level in spite of the fact that knowledge itself actually originates from the individual. Even at the group or organizational level, most studies dealt with a specific knowledge type, such as best practices (Szulanski, 1996) or a specific context, such as between dispersed teams (Tsai, 2002). In addition, factors such as trust, willingness to share, information about the knowledge holder, and the level of codification of knowledge were considered in abstract. Although these factors are valuable, they require further empirical research before they could be used to explain the individual's fundamental motivation to share knowledge. Thus, this study aims to develop an understanding of the factors that support or constrain the individual's knowledge sharing behavior in the organization, with a special interest in the role of rewards. This is done according to Fishbein and Ajzen's (1975) Theory of Reasoned Action (TRA), a widely accepted social psychology model that is used to explain almost any human behavior (Ajzen & Fishbein, 1980).

## BACKGROUND

Due to the fact that knowledge is a resource that is locked in the minds of humans, knowledge sharing does not occur with the sole implementation of information systems. As such, an investigation into the individual's motivation behind knowledge sharing behavior, coupled with a firm foundation in social psychology, should take precedence. Accordingly, the TRA is adopted so as to provide a well-established explanation for such volitional, rational, systematic decision logic as that of knowledge sharing.

The TRA assumes that human beings are usually rational in thinking, and would systematically use available information (Fishbein & Ajzen, 1975). In the TRA, the individual's attitude toward and subjective norm regarding a behavior jointly determine the behavioral intention that results in the individual's decision to engage in a specific behavior. In this study, we focus only on the salient beliefs that affect the knowledge sharing attitude because knowledge sharing behavior is assumed to be motivated and executed mainly at the individual level. Since the TRA can be applied to almost any behavior, the nature of the beliefs operative for a particu-

*Table 1. Factors affecting knowledge management and knowledge sharing*

| | Factors | References |
|---|---|---|
| Knowledge Management | Knowledge management system, Network, Knowledge worker, Clear vision and goals, Middle-up-down management, Organizational change, Monitoring and support, Knowledge infrastructure, Knowledge repository and map, Organizational culture, Top manager's support | Davenport, De Long, and Beers (1998); Davenport and Prusak (1998); Earl (1996); Nonaka and Takeuchi (1995); Ulrich (1998); Wiig (1997) |
| Knowledge Sharing | The Group and Organizational Level<br>Level of trust between groups, Arduous relationship between source and the recipient, Role of top managers, Characteristics of knowledge, Prior experience on knowledge transfer, Channel richness, Openness of the organization | Butler (1999); Gupta and Govindarajan (2000); Kogut and Zander (1993); Nelson and Cooprider (1996); Szulanski (1996); Wathne, Roos and Krogh (1996) |
| | The Individual Level<br>Trust between individuals, Willingness to share, Information about the knowledge holder, Level of codification of knowledge | Hansen (1999); Kramer (1999); Moreland (1999); Stasser, Stewart, and Wittenbaum (1995); Tsai and Ghoshal (1998) |

lar behavior are left unspecified. Following the elicitation recommendations suggested by Fishbein and Ajzen (1975), free response interviews to elicit five to nine salient beliefs were conducted with chief knowledge officers (CKO) and chief information officers (CIO) of the subject population in April 1999. Once these salient beliefs surfaced, the research model was developed.

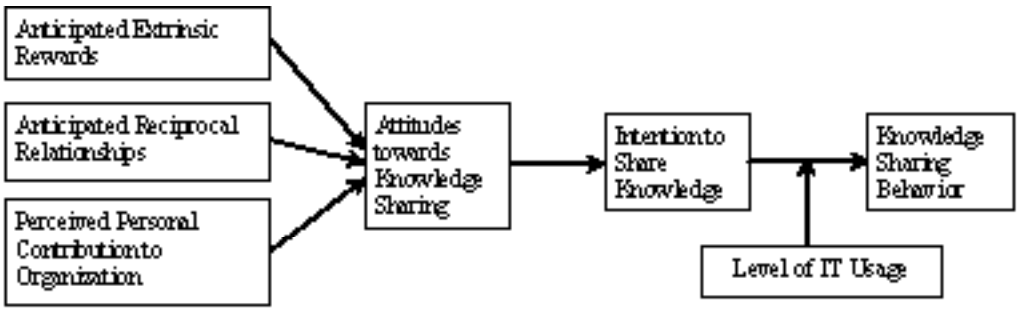
We propose three factors that are consistently emphasized throughout the interviews: anticipated extrinsic rewards, anticipated reciprocal relationships, and perceived personal contribution to the organization, as the antecedents of the attitudes towards knowledge sharing. According to the interdependence theory, individuals will behave according to rational self-interest. Knowledge sharing occurs when the rewards exceed the costs (Constant, Keisler & Sproull, 1994; Kelley & Thibaut, 1978), implying that anticipated extrinsic rewards will positively affect the individual's attitude. Concerning intrinsic rewards, the social exchange theory states that social exchanges entail unspecified obligations (Blau, 1967). As employees are seen to believe that their relationship with others can be improved through sharing knowledge, the anticipated reciprocal relationships positively affect the individual's attitude. In addition to these, the self-motivation theory (Deci, Connell & Ryan, 1989; Iaffaldano & Muchinsky, 1985; Schwab & Cummings, 1970) finds that feedback from others on shared knowledge can form a self-motivational factor and serve as another major determinant of the attitude toward knowledge sharing. Eisenberger and Cameron (1996) note that one's sense of competence actually increases due to the feedback concerning the quality of one's output. Employees who are able to link instances of past knowledge sharing with an understanding of how these actions contribute to others' work, and/or improvements in organizational performance are likely to develop more favorable attitudes toward knowledge sharing than employees who are unable to construct such linkages. Finally, following Fishbein and Ajzen's (1975) argument about the possibility of several external variables affecting intention to perform a behavior, we introduced an aspect of information technology (IT) into our model. Since IT is considered to be an important enabler in knowledge management (O'Dell & Grayson, 1998; Ruggles, 1998), we examined how the individual's level of IT usage affects knowledge sharing behavior.

Data were collected through the utilization of a survey. A total of 900 questionnaires were distributed in October and November 1999 to employees in 75 departments of four large government-invested organizations in South Korea. Of this total number, 861 responses were received, of which 467 were usable. We found that the anticipated reciprocal relationship provided for the individual's positive attitude towards knowledge sharing, and resulted in a positive influence of intention and behavior. However, contrary to many researchers' expectations, anticipated extrinsic rewards were found to have a negative effect on such an attitude.

## FUTURE TRENDS

This negative correlation—which might prove important for future research—can be explained with the results of research in the pay-performance area. Kohn (1993) found that there is either no relationship or a negative relationship

*Figure 1. Research model*




between rewards and performance, although many assume that people will do a better job if they are promised some form of reward. Kohn cited six reasons as to why rewards fail, three of which can also be considered within the knowledge-sharing context.

First, rewards are seen to have a punitive effect because, as compared to outright punishment, they are manipulative in nature. Not receiving an expected reward is seen to be indistinguishable from being punished. Both result in movement, but not motivation (Herzberg, 1968). Rewards are seen to destroy relationships because for any one winner, many others would feel that they have lost. When there exists a limited number of rewards, competition between employees will ensue. Second, rewards are at times used as a simpler alternative to addressing underlying issues, such as the lack of an ideal knowledge-sharing culture within the organization. The ideal culture mentioned should include providing useful feedback, social support, and room for self-determination. Third, rewards could be an undermining factor towards intrinsic motivation. Interest in knowledge sharing would decrease with an increase in one's perception of being controlled (Levinson, 1973). Employees might assume that the task at hand is not something they would want to do if they have to be bribed to do it. As such, with the increase in incentive offered, the negative perception towards the task at hand becomes greater.

Another explanation can also be found in organizational citizenship behavior literature. According to Katz and Kahn (1966), any critical voluntary behavior that is beyond the scope of one's job description is a direct result of one's identification with and internalization of individual and organizational values, rather than the involvement of any external factors. Furthermore, Constant et al. (1994) stated that experienced workers perceive the process of sharing knowledge as part of normal business activity. These workers hold a negative view of any extrinsic rewards given in return for sharing knowledge. With such strong support for the negative effect view of extrinsic rewards on the attitude towards knowledge sharing, would it be right to completely discard extrinsic rewards?

Eisenberger and Cameron (1996) found that extrinsic rewards could both positively and negatively influence motivation—knowledge sharing in this case. They find that rewards can be divided into two broad types, namely task-contingent and quality-dependent rewards. Quality-dependent rewards positively influence organization initiatives, as they do not reduce one's intrinsic motivation. In fact, due to the feedback concerning the quality of one's output, one's sense of competence actually increases. Task-contingent rewards, on the other hand, undermine any task because of their negative influence on intrinsic motivation. A possible design for such a scheme is a knowledge market where "buyers and sellers of knowledge negotiate a mutually satisfactory price for the knowledge exchanged" (Ba, Stallaert & Whinston, 2001, p. 232). In this way, the reward of individuals would be based on the usefulness of their knowledge, thus ensuring the creation of high-quality knowledge.

In addition, a reward that is less than what employees feel their performance justify could threaten their self-esteem. This is due to the fact that the self-ratings done by employees are usually higher than those done by the management. According to Meyer (1975), a common way for employees to cope with such a problem is to "downgrade the importance of the activity on which the threat is focused" (p. 44). Hence, an incentive scheme should be well-designed so as to reward individuals who are deemed deserving, as the rewarding of contributors aids in positively influencing the sharing of knowledge. Additionally, the scheme's design should discourage self-centered behavior, which is detrimental to the organization's health (Michailova & Husted, 2003); otherwise, the scheme would only produce temporary compliance, and might decrease an individual's intrinsic motivation (Deci, 1971,1972a). When intrinsic interests exist among employees for a particular task, the attachment of

incentives to the performance of the task only results in the decrease of that interest (Deci, 1972b). "When pay becomes the important goal, the individual's interest tends to focus on that goal rather than on the performance of the task itself" (Meyer, 1975, p. 41), thus resulting in employees striving to increase incentives at the cost of output quality.

Furthermore and most importantly, an incentive scheme needs to be incorporated with proper organization norms (Markus, 2001). If the norms are not in place, employees will not share their knowledge even if there is in place, a comprehensive incentive scheme. According to O'Dell and Grayson (1998), "if the process of sharing and transfer is not inherently rewarding, celebrated and supported by the culture, then artificial rewards [will not] have much effect and can make people cynical" (p. 168). Husted and Michailova (2002) also stated that "unless knowledge sharing is built into the expectation of the individual and is reflected in the reward mechanism, sharing will not take place".

## CONCLUSION

In summary, of the two views posed by past research, our recent study to discover the influence of extrinsic rewards in knowledge sharing supports the negative view. This implies that, when the management of an organization is motivated to embrace knowledge sharing but its employees are not, using incentives to influence knowledge sharing would only result in the employees placing emphasis on the incentives. This could result in the sharing of low-quality knowledge and undermine the whole knowledge-sharing effort. Furthermore, the continuous use of incentives "could actually be encouraging hoarding behavior and competitive actions, diminishing the free flow of knowledge in the organization" (Wasko & Faraj, 2000, p. 162). Therefore, extrinsic rewards should be coupled with other factors, such as organizational norms, to bring about benefits. The reconciliation of this disparity in views should provide new grounds for future research.

## REFERENCES

Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. Englewood Cliffs, NJ: Prentice-Hall.

Alavi, M., & Leidner, D.E. (2001). Knowledge management and knowledge management systems: Conceptual foundations and research issues. *MIS Quarterly*, *25*(1), 107-136.

Ba, S., Stallaert, J., & Whinston, A.B. (2001). Introducing a third dimension in information systems design-The case for incentive alignment. *Information Systems Research*, *12*(3), 225-239.

Blau, P. (1967). *Exchange and power in social life*. New York: Wiley.

Bock, G.W., & Kim, Y.G. (2002). Breaking the myths of rewards: An exploratory study of attitudes about knowledge sharing. *Information Resources Management Journal*, *15*(2), 14-21.

Bock, G.W., Zmud, R.W., Kim, Y.G., & Lee, J.N. (2003). *Determinants of the individual's knowledge sharing behavior: From the theory of reasoned action*. University of Minnesota: Minnesota Symposium on Knowledge Management, 3.

Butler, J.K. (1999). Trust expectations, information sharing, climate of trust, and negotiation effectiveness and efficiency. *Group & Organization Management*, *24*(2), 217-238.

Constant, D., Keisler, S., & Sproull, L. (1994). What's mine is ours, or is it? A study of attitudes about information sharing. *Information Systems Research*, *5*(4), 400-421.

Davenport, T.H., De Long, D.W., & Beers, M.C. (1998). Successful knowledge management projects. *Sloan Management Review*, *39*(2), 43-57.

Davenport, T.H., & Prusak, L. (1998). *Working knowledge*. Boston, MA: Harvard Business School Press.

Deci, E.L. (1971). Effects of externally mediated rewards on intrinsic motivation. *Journal of Personality and Social Psychology*, *18*(1), 105-115.

Deci, E.L. (1972a). Intrinsic motivation, extrinsic reinforcement, and inequity. *Journal of Personality and Social Psychology*, *22*(1), 113-120.

Deci, E.L. (1972b). The effects of contingent and noncontingent rewards and controls on intrinsic motivation. *Organizational Behavior and Human Performance*, *8*, 217-229.

Deci, E.L., Connell, J.P., & Ryan, R.M. (1989). Self-determination in a work organization. *Journal of Applied Psychology*, *74*(4), 580-590.

Earl, M.J. (1996). Knowledge as strategy. In L. Prusak (Ed.), *Knowledge in organizations*. Newton, MA: Butterworth-Heinemann.

Eisenberger, R., & Cameron, J. (1996). Detrimental effects of reward: Reality or myth? *American Psychologist*, *51*(11), 1153-1166.

Ewing, J., & Keenan, F. (2001). Sharing the wealth. *Business Week, 3724,* EB36-EB40.

Fishbein, M., & Ajzen, I. (1975). *Beliefs, attitude, intention and behavior: An introduction to theory and research*. Philippines: Addison-Wesley Publishing Company.

Gupta, A.K., & Govindarajan, V. (2000). Knowledge flows within multinational corporations. *Strategic Management Journal*, *21*(4), 473-496.

Hansen, M.T. (1999). The search–transfer problem: The role of weak ties in sharing knowledge across organization subunits. *Administrative Science Quarterly*, *44*(1), 82-111.

Herzberg, F. (1968). One more time: How do you motivate employees? *Harvard Business Review*, *46*(1), 53-62.

Husted, K., & Michailova, S. (2002). Knowledge sharing in Russian companies with western participation. *International Management*, *6*(2), 17-28.

Hyoung, K.M., & Moon, S.P. (2002). Effective reward systems for knowledge sharing. *Knowledge Management Review*, *4*(6), 22-25.

Iaffaldano, M.T., & Muchinsky, P.M. (1985). Job satisfaction and job performance: A meta-analysis. *Psychological Bulletin*, *97*(2), 251-273.

Katz, D., & Kahn, R.L. (1966). *The social psychology of organizations*. New York: Wiley.

Kelley, H.H., & Thibaut, J.W. (1978). *Interpersonal relations: A theory of independence*. New York: Wiley.

Kogut, B., & Zander U. (1993). Knowledge of the firm and the evolutionary theory of the multinational corporation. *Journal of International Business Studies*, *24*(4), 625-645.

Kohn, A. (1993). Why incentive plans cannot work. *Harvard Business Review*, *71*(5), 54-63.

Kramer, R.M. (1999). Social uncertainty and collective paranoia in knowledge communities: Thinking and acting in the shadow of doubt. In L.L. Thomson, J.M. Levine & D.M. Messick (Eds.), *Shared cognition in organizations, the management of knowledge*. London: LEA Inc.

Levinson, H. (1973). Asinine attitudes toward motivation. *Harvard Business Review*, *51*(1), 70-76.

Markus, M.L. (2001). Toward a theory of knowledge reuse: Types of knowledge reuse situations and factors in reuse success. *Journal of Management Information Systems*, *18*(1), 57-93.

McDermott, R., & O'Dell, C. (2001). Overcoming cultural barriers to sharing knowledge. *Journal of Knowledge Management*, *5*(1), 76-85.

Meyer, H.H. (1975). The pay-for-performance dilemma. *Organization Dynamics*, *3*(3), 39-50.

Michailova, S., & Husted, K. (2003). Knowledge-sharing hostility in Russian firms. *California Management Review*, *45*(3), 59-77.

Moreland, R.L. (1999). Transactive memory: Learning who knows what is work groups and organizations. In L.L. Thomson, J.M. Levine & D.M. Messick (Eds.), *Shared cognition in organizations, the management of knowledge*. London: LEA Inc.

Murray, P. (1999, March 8). How smarter companies get results from KM. *Financial Times*, 15.

Nelson, K.M., & Cooprider, J.G. (1996). The contribution of shared knowledge to IS group performance. *MIS Quarterly*, *20*(4), 409-429.

Nonaka, I., & Takeuchi, H. (1995). *The knowledge-creating company*. New York: Oxford University Press.

O'Dell, C., & Grayson, C.J. (1998). If only we knew what we know: Identification and transfer of internal best practices. *California Management Review*, *40*(3), 154-174.

Ruggles, R. (1998). The state of notion: Knowledge management in practice. *California Management Review*, *40*(3), 80-89.

Schwab, D.P., & Cummings, L.L. (1970). Theories of performance and satisfaction. *Industrial Relations*, *9*(4), 408-430.

Stajkovic, A.D., & Luthans, F. (1998). Social cognitive theory and self-efficacy: Going beyond traditional motivational and behavioral approaches. *Organizational Dynamics*, *26*(4), 62-74.

Stasser, G., Stewart, D.D., & Wittenbaum, G.M. (1995). Expert roles and information exchange during discussion: The importance of knowing who knows what. *Journal of Experimental Social Psychology*, *31*(3), 244-265.

Stenmark, D. (2000). Leveraging tacit organizational knowledge. *Journal of Management Information Systems*, *17*(3), 9-24.

Szulanski, G. (1996). Exploring internal stickiness: Impediments to the transfer of best practice within the firm. *Strategic Management Journal*, *17*(Winter), 27-44.

Triandis, H.C. (1971). *Attitude and attitude change*. New York: John Wiley & Sons, Inc.

Tsai, W. (2002). Social structure of "coopetition" within a multiunit organization: Coordination, competition, and intraorganizational knowledge sharing. *Organization Science*, *13*(2), 179-190.

Tsai, W., & Ghoshal, S. (1998). Social capital and value creation: The role of intrafirm networks. *Academy of Management Journal*, *41*(4), 464-476.

Ulrich, D. (1998). Intellectual capital = Competence x commitment. *Sloan Management Review*, *39*(2), 15-26.

Wasko, M.M., & Faraj, S. (2000). "It is what one does": Why people participate and help others in electronic communities of practice. *The Journal of Strategic Information Systems*, *9*(2-3), 155-173.

Wathne, K., Roos, J., & Krogh, G. (1996). Toward a theory of knowledge transfer in a cooperative context. In G. Krogh & J. Roos (Eds.), *Managing knowledge*. London: Sage.

Wiig, K.M. (1997). Knowledge management: Where did it come from and where will it go? *Expert Systems with Applications*, *13*(1), 1-14.

## KEY TERMS

**Explicit Knowledge:** Knowledge that has been captured and codified into manuals, procedures, and rules, and is easy to disseminate (Stenmark, 2000).

**Extrinsic Rewards:** Incentives that are mediated outside of a person, such as praises and monetary compensation (Deci, 1972b).

**Implicit Knowledge:** Knowledge that can be expressed in verbal, symbolic, or written form but has yet to be expressed (Bock, Zmud, Kim, & Lee, 2003).

**Intrinsic Rewards:** Incentives that are mediated within a person, such as satisfaction (Deci, 1972b).

**Knowledge Management System:** A knowledge repository, shared knowledge base or knowledge based system, which is a class of information systems developed to support and enhance the organizational processes of knowledge creation, storage / retrieval, transfer and application (Alavi & Leidner, 2001).

**Knowledge Sharing:** Voluntary activities of transferring or disseminating knowledge between people or groups in an organization (Bock, Zmud, Kim & Lee, 2003).

**Organizational Norm:** Organization culture or climate, which consists of the shared values, beliefs and practices of the people in the organization (McDermott & O'Dell, 2001).

**Tacit Knowledge:** Knowledge that cannot be easily articulated, and thus only exists in people's minds, and is manifested through their actions (Stenmark, 2000).

*This work was previously published in Encyclopedia of Information Science and Technology, edited by M. Khosrow-Pour, pp. 2110-2115, copyright 2005 by Information Science Reference, formerly known as Idea Group Reference (an imprint of IGI Global).*