

Question 1: Gatekeepers and Boundary Spanners

Leonard-Barton (1995) discussed the related topics of gatekeepers and boundary spanners most prominently in her sixth chapter; while they are inherently part of the entire chapter, her discussion of how organizations should manage “the absorption of knowledge” (p. 155) focused on them. Flows of information and knowledge that come from outside the organization, where these flows are sourced from, and how these flows are directed are “heavily controlled by technological gatekeepers” (p. 157). These gatekeepers seek out and use “more outside sources than ... their colleagues,” thus serving a critical role in spreading relevant and important information and knowledge from outside the organization to those within it (p. 157).

Leonard-Barton (1995) mentioned boundary spanners separately, saying they “augment” the role of technological gatekeepers (p. 158). However, they arguably serve an almost identical role in translating and disseminating knowledge from a source to a receiver, working “at the interface” between the two and requiring much entrepreneurial skill to perform this task successfully (p. 158). Multiple boundary spanners will reduce the potential for bottlenecks and help ensure knowledge is successfully translated, particularly when it expresses a capability the company wishes to develop. Since boundary spanners’ knowledge is most often tacit, they become highly valued and must be nurtured to ensure they succeed, either staying with the organization or capturing and sharing much of their knowledge with others before they leave. Finally, earlier in her book Leonard-Barton discussed how physical objects—especially prototypes—can also cross boundaries and translate between the different social worlds of individuals and organizations (p. 83). These boundary objects thus serve a similar purpose to boundary spanners and gatekeepers, albeit fulfilling the goal of translation in a different way.

Facilitating the Talents of Gatekeepers and Boundary Spanners

Whelan, Collings, and Donnellan (2010) explored the talents that gatekeepers, boundary spanners, and other key individuals in organizations possess, suggesting how these can be better supported and facilitated. They stressed the “value of external knowledge” and absorptive capacity—the ability to absorb external knowledge—in ensuring organizations remain competitive and innovative (p. 487). Technological gatekeepers are key to this; the authors also found this concept to be consistent with Rogers’s diffusion of innovation, Granovetter’s strength of weak ties, Burt’s structural holes, and Gladwell’s tipping point. In addition, they noted more recent research into communities of practice that had identified similar concepts: central connectors, boundary spanners, and knowledge brokers. While these had “only marginally extend[ed] the gatekeeper concept,” updated studies were required of “modern” gatekeepers and the skills and talents they share (p. 490). Whelan et al. also discussed talent management—concerned with identifying “key positions” which contribute to competitive advantage and the talents that must be facilitated to fill them successfully (p. 491)—noting it shares similarities with recent knowledge management research on tacit knowledge sharing (pp. 491-492).

Whelan et al. (2010) conducted a mixed-methods study of the R&D group of an Irish “medical device manufacturing firm,” employing social network analysis and semi-structured interviews to map the social and knowledge network, identify the key employees, and discuss their skills and competencies (p. 492). Only two employees were “classic ... technological

gatekeepers,” but a number of pairings were also identified between “external stars”—those well-connected externally—and “internal stars”—those well-connected internally (p. 494). From interviews with all types of employees, Whelan et al. found the key talents of external stars were their (a) ability to obtain relevant external knowledge, (b) deep, narrowed knowledge of a particular domain, and (c) strong analytical skills. Internal stars had a broader knowledge base, which better facilitated their ability to translate external knowledge to make it understandable by others within the organization. Gatekeepers needed both sets of talents, and thus were rarer; they also were highly sociable and displayed excellent networking skills. The authors also identified motivations, attitudes, and preferred source media for each of these types (see p. 495).

Whelan et al. (2010) concluded that the role of gatekeeper is now more often “performed by external and internal communication specialists who combine their unique talents together” (p. 497). They argued for these key gatekeepers and boundary spanners to be supported “disproportionate[ly]” (p. 497), further suggesting managers should ensure (a) external stars are “freed ... [from] administrative duties and allocated the time they need to scan the external environment” and obtain relevant knowledge (p. 498); (b) external stars’ travel to conferences and tradeshow is prioritized; (c) internal stars’ are given opportunities to network—especially with external stars—and to work in multiple projects; and (d) “interaction and collaboration between” IT and HR staff is facilitated to “maximize the potential” (p. 499).

Analysis

While the findings of Whelan et al. (2010) are limited in their generalizability, they clearly show that the concepts of gatekeepers and boundary spanners discussed by Leonard-Barton (1995) are still highly relevant to present-day knowledge management. Translating between the social, information, and knowledge worlds of outsiders and insiders is difficult; Holden & Von Kortzfleisch (2004) likened it to the process of translating language, clearly not an easy task. In addition, Mäkelä (2007) noted that while “boundary spanning linkages [are required] for effective knowledge sharing, [they] may ... not be sufficient” (p. 120). The linkages present in Whelan et al.’s (2010) analysis of the social and knowledge network were thus not enough evidence to prove the worth of the gatekeepers and boundary spanners; they needed further evidence of strong social ties, networking skills, and translation skills from the interviews they conducted to prove their usefulness as a knowledge sharing strategy, all factors echoed by Holden & Von Kortzfleisch (2004), Leonard-Barton (1995), and Mäkelä (2007).

Developing successful knowledge sharing across boundaries as a core capability requires drawing on all four of the dimensions Leonard-Barton (1995, p. 19) identified. Whelan et al. (2010) focused on the skills and knowledge of employees and managerial systems that could facilitate these. However, the values and norms of the organization and of employees would also be a key factor, as shown in many of the case studies and readings we have reviewed throughout the semester. Finally, physical systems for information and knowledge management are equally important; they must serve as boundary objects that can support successful translation between and across individuals, organizations, industries, and cultures. Whelan’s article updates the literature on gatekeepers and knowledge spanners, showing its continued importance to successful knowledge management and hinting at further research and analysis that can suggest successful management strategies for facilitation of these key roles in organizations.

Question 2: Cross-Cultural Ethics in Communities of Practice

As the question prompt noted, multicultural and global environments lead to variances in ethical and moral values between individuals, groups, organizations, and cultures. Holden and Von Kortzfleisch (2004, p. 127) stated in their introduction that “knowledge management is becoming increasingly the management of the transfer of knowledge generated by cross-cultural teams,” with “cultural distance” causing “resistance, frictions, and misunderstandings.” Nevertheless, there are ways to work beyond this distance, establishing cross-cultural ethical standards and understandings that can support successful global collaboration, transfer, and management of knowledge within communities of practice. In particular, translation, sense-making, socialization, and social ties all play important roles as concepts and processes, as will be discussed below.

Transferring and Translating Ethical Knowledge

Holden and Von Kortzfleisch (2004), in applying translation theory to the problem of cross-cultural knowledge transfer, presented a model for potentially better facilitating this transfer. They covered three problems with translation: (a) unintended *ambiguity*, “something that proceeds from perceived confusions about a message source” and thus leads to “accepting something misunderstood at face value” (p. 131); (b) *interference* caused by the norms and patterns of one culture or language being falsely transferred to a foreign culture or language; and (c) *lack of equivalence* in concepts, “view[s], purpose[s], and priorities” between cultures (p. 133). Cultural differences, they said, must be valued and leveraged; transfer of knowledge must be seen as “a sense-making activity” and as conceptually similar to translation (p. 133), sensing the particular context of a culture and how knowledge might be interpreted and understood within it. Successful transfer and translation, according to Holden and Von Kortzfleisch’s model, will come through the processes of socialization, externalization, internalization, and combination, subject to the influences of ambiguity, interference, and lack of equivalence. A community of practice therefore should employ these processes with the goal of encouraging common ethical norms within its contextual boundaries and with an eye towards those factors that could disrupt such norms.

Mäkela (2007), in her study of the sharing and transfer of knowledge via expatriate relationships—a form of immersion within the culture—found such relationships to have “a higher level of social capital present within them than [those] more [at] arm’s-length” (p. 120). Strong ties were developed and strengthened through these relationships, helping to support successful knowledge transfer and sharing. As such, a community of practice should look to establish similarly strong ties amongst its members, particularly between those from different cultures, aiding processes of immersion. Given the common interests and practices of members, this will be less difficult than it could be; however, a concerted effort may be necessary if the cultural boundaries are especially visible and hard to break down. Socialization processes, as suggested by Holden and Von Kortzfleisch, can help in the strengthening of social ties. For example, the World Bank (itself a multicultural organization) found success in establishing a multicultural “thematic group” (Fulmer, 2001, p. 10) by ensuring cultures were represented in the leadership of the group. The initially invited leader, George Gattoni, ensured that the leadership board of the emerging group included one member from each of the Bank’s four

geographical areas. Testing of knowledge management projects also took place in different countries and regions, rather than pilot tests always occurring in the same culture or location. In this way substantial socialization and social ties were built within the group, helping to promote common approaches to transferring knowledge and to its ethical management.

Determining Common Ethics

Specifically considering ethics in the corporate domain, Smith (2004) focused on two theories of “getting to the ‘right’ answer” when considering ethical quandaries and differences (p. 107). Stockholder theory requires that managers use any and all “legal, non-deceptive means” to increase company productivity over the long term, thus leading to the maximum benefits for stockholders (p. 108). Stakeholder theory, on the other hand, asserts the duty of managers goes beyond stockholders to all stakeholders who have “a stake in or claim on the firm” (p. 108); in this way it goes beyond questions of “is it legal?” and pure profit-chasing to consider the effects of actions upon any interested party and the morals and values behind them. No stakeholder’s rights can be violated; as long as none are, “the ethically ‘right’ thing [to do] is the alternative that best balances the interests of the various stakeholder groups” (p. 108).

Of course, deciding between these two theories—or permutations of them along a continuum—and ensuring that the entire community of practice is on board across cultures will be difficult. Smith (2004, p. 113) stressed the importance of creating “a consistent, overarching understanding in the organization” before any ethical quandaries arise. He presented Ellsworth’s (2002, as cited in Smith, 2004, p. 113) suggestion that scenarios could be presented in “challenge sessions” to allow the community to explore and develop a common understanding of ethics, thus establishing ethical norms to be followed in the future. While Smith did not suggest any particular ways of ensuring maintenance of these norms, the “challenge sessions” concept could be extended longitudinally to encourage further exercises that (a) test the established norms; (b) ensure any changes that need to be made occur; and (c) reinforce, via the scenarios presented, any norms that management feels need to be stressed.

Conclusion

Given the increasing need to share and transfer knowledge across cultures within a community of practice, it is clear that establishing and maintaining ethical norms is a challenge that must be met. Considering this as an ongoing process of sense-making, translating between and building a common understanding across cultures, should help communities of practice achieve success in this endeavor. Socialization processes should take center stage, allowing for the tacit ethical knowledge of members of each culture to be shared with those from other cultures. Externalization of this tacit knowledge in explicit forms, combining it with the explicit knowledge of those from other cultures, and then ensuring it is internalized by all through frequent discussion of fictional scenarios will further help in the establishment and maintenance of common ethical standards and guidelines. Such processes should create and strengthen strong social ties across cultures, particularly if cultural diversity is encouraged in smaller groups within the community and in group discussions of the scenarios. Overall, these suggestions should lead to common ethical values and norms throughout a multicultural community of practice.

Question 3: Innovation Success and Failure

The processes of knowledge management, and particularly those intended to import and absorb knowledge from outside the organization, are critical to the success or failure of the organization, its initiatives, and its innovations. As Leonard-Barton (1995) discussed at length throughout her book, the core capabilities of a firm are created and maintained through activities to solve present problems, the implementation and integration of internal knowledge, experimenting to create and capture future knowledge, and the importing of external knowledge from other organizations. All of these are crucial, but taking knowledge from beyond the firm's boundaries is especially so; "very few, if any, companies can build core capabilities without" absorbing knowledge from outside sources (p. 135). Two key aspects of managing knowledge— aspects which are key no matter where it is sourced from, but especially important when considering knowledge absorption—are supporting the successful transfer of knowledge and being able to evaluate both the knowledge and its source. Each of these has clear impacts on the success or failure of innovations and organizational initiatives, as discussed below.

Successful Transfer of Knowledge

Davenport and Prusak (2000) discussed knowledge transfer at some length in their chapter 5 (pp. 88-106). One of the major issues relating to this aspect of knowledge management is actually knowing where the knowledge is in the first place; simply having a basic idea that one thinks is "good enough" is often, in fact, *not* good enough" (p. 89). The authors argued that "spontaneous, unstructured knowledge transfer is vital to a firm's success" (p. 89) and thus to its development of successful innovations and core capabilities. They suggest a number of potential strategies to use to encourage successful knowledge transfer, including water coolers and talk rooms (pp. 90-93), knowledge fairs (pp. 93-95), building trust and common ground (pp. 97-100), and internalization and socialization of the knowledge of practices and processes (pp. 102-104). If these strategies are used successfully, they can certainly have a great effect on the success of an innovation; if used poorly or not at all, then the effect could very well be to cause failure.

Consider the problem of establishing common ground, already partly discussed in question 2 in the context of ethics. With respect to manufacturing and technical knowledge, Davenport and Prusak (2000) provide a few examples: doctors in New England hospitals observed other doctors performing "coronary-artery bypass surgery" (p. 97) and received "training in continuous improvement techniques" (p. 98), thus reducing the mortality rate of the surgery for the participating hospitals; BP employed "consultants to translate observations made by 'roughnecks' on North Sea oil rigs" so that management back on dry land could understand what was going on (p. 99); and civil engineers in Boston tried to understand a new drilling process to be used in boring a tunnel, who had to be brought together—at great expense—with those in New Zealand who had developed the new process to socialize and transfer the knowledge between the groups. In all three cases, establishing common ground and socializing knowledge led to the success of innovations: a new medical skill-sharing process, better techniques for oil drilling, and better civil engineering of a harbor tunnel. If such common ground had not been established and the knowledge had not been managed or shared as well, then the innovations would have failed to varying degrees: the lack of better techniques for oil drilling may have reduced BP's profits, the Boston tunnel may have wasted thousands of

taxpayer dollars, and—most critically—more patients may have died during coronary-artery bypass surgery. In these cases, clearly the ability for these organizations “to recognize the value of [the] new external information” (Leonard-Barton, 1995, p. 136) and absorb it into their practices through the establishment of common ground was crucial to the success or failure of the innovations they were trying to implement.

Evaluation of Knowledge and its Source

Leonard-Barton (1995) persuasively argued that managers must “understand the potential of [a] technology” that may be obtained, “assess the expertise”—i.e. the knowledge—“of the source in that technology, and identify the true location of that expertise” (p. 167). Despite Leonard-Barton’s focus on technology and manufacturing knowledge, extension of this idea to knowledge of all kinds, not just that about technology, is very valuable. Evaluating the knowledge and its source is a vital part of facilitating successful organizational initiatives and innovation in practices. The case of GE Plastics’s Polymer Solutions joint venture (pp. 168-169) is a particularly telling case of failure in innovation and organizational initiatives. In this case, GEP was losing money on providing design and engineering services to customers prior to the full manufacturing stage, since they were not charging for these. They decided to set up a joint venture to serve customers for a longer period of time, including all of the way through manufacturing, in an attempt to make a profit on these services instead. However, the design house that they chose to partner with turned out not to have any manufacturing engineers, just like GEP. Because of this, the first product development project and innovation undertaken by the joint venture—an automatic teapot—was a failure, causing delays and eating into profits. Rather than evaluating the source, their knowledge, and their expertise, GEP chose to partner with the design house solely based on “personal chemistry” (p. 169). This lack of foresight and careful evaluation of knowledge and its source doomed the initiative from the beginning.

Evaluation of knowledge can also drive a successful and innovative knowledge management project. For example, the Siemens ShareNet system (MacCormack, 2002) allowed employees to rate and provide feedback on the knowledge that others had contributed; these ratings were then rewarded with points that could be redeemed for gifts and prizes. Ratings thus provided a way for other employees to evaluate both the knowledge itself as well as each other. The feedback provisions helped contribute to the sharing of innovative and useful knowledge using the system, as well as the success of the system as an innovation in its own right.

Conclusion

Being able to evaluate knowledge and its value, then transferring, absorbing, and applying it in a different context, will contribute greatly to successful innovation. A lack of this ability, as shown with GEP, will often lead to failed innovations and initiatives. Success in these aspects—as especially shown with ShareNet, the Boston-based civil engineers, and the New England hospitals—can lead to wildly successful projects that result in greater profits for firms, better experiences for employees and consumers, and potentially even the saving of patients’ lives. Absorptive capacity is clearly, thus, a key factor in developing core capabilities, and the successful transfer of and ability to evaluate knowledge are particularly key aspects within it.

References

- Davenport, T. H., & Prusak, L. (2000). *Working knowledge: How organizations manage what they know*. Boston, MA: Harvard Business School Press.
- Fulmer, W. (2001). *The World Bank and knowledge management: The case of the Urban Services Thematic Group* (Case Study No. 9-801-157). Boston, MA: Harvard Business School Publishing.
- Holden, N. J., & Von Korfleisch, H. F. O. (2004). Why cross-cultural knowledge transfer is a form of translation in more ways than you think. *Knowledge and Process Management*, 11(2), 127-136. doi:10.1002/kpm.198
- Leonard-Barton, D. (1995). *Wellsprings of knowledge: Building and sustaining the sources of innovation*. Boston, MA: Harvard Business School Press.
- MacCormack, A. (2002). *Siemens ShareNet: Building a knowledge network* (Case Study No. 9-603-036). Boston, MA: Harvard Business School Publishing.
- Mäkelä, K. (2007). Knowledge sharing through expatriate relationships: A social capital perspective. *International Studies of Management and Organization*, 37(3), 108-125. doi:10.2753/IMO0020-8825370305
- Smith, H. J. (2004). "But what is the 'right thing'?: Ethics and information systems in the corporate domain. *MIS Quarterly Executive*, 3(2), 105-115.
- Whelan, E., Collings, D. G., & Donnellan, B. (2010). Managing talent in knowledge-intensive settings. *Journal of Knowledge Management*, 14(3), 486-504. doi:10.1108/13673271011050175