

**A**ttempts to trap knowledge within the borders of an organisation are usually futile. Unless it is feasible to chain employees to their desks, knowledge will always flow outside a company. **Thomas H Davenport and Laurence Prusak.**



How much knowledge should a business give away? Our answer is, in short, “a lot”. The benefits of a closed knowledge environment within a company are highly overrated, while the benefits of an open environment tend to be underrated. Most companies - and governments, for that matter - spend too much time and energy protecting their knowledge, and don't worry enough about creating and sharing it. Companies have always had advocates - usually attorneys - for keeping knowledge secret, but there are rarely advocates for sharing it.

First, let us describe the virtues of openness. We are not primarily advocating this approach because of the so-called “open-source revolution”, which is a fashionable concept. Open source has been evolutionary rather than revolutionary. It is only common in one industry - software - and it has yet to displace large competitors such as Microsoft, Oracle and SAP. Second, the circumstances under which open source works well are not common. The Linux open-source movement, for example, does not involve an organisational hierarchy, but it

does involve a semi-structured hierarchy of expertise headed by Linus Torvalds.

Our advocacy of sharing knowledge is primarily based on what it does for an individual's, an organisation's or a society's knowledge environment and culture. Our research on high-performing knowledge workers (Davenport, 2005) suggests that the best performers are those who share knowledge frequently with their peers.

When individuals view knowledge as something to share rather than to protect, it becomes the basis for new knowledge and learning. When knowledge is freely shared, social networks and knowledge-based “communities of practice” form and are strengthened, both within and across organisations. This leads to the cross-fertilisation of ideas and, ultimately, to innovation.

As Andrew Hargadon demonstrates in his book *How Breakthroughs Happen*, innovations are seldom the work of lone geniuses. Instead, they are the outgrowth of a network of innovative people, working across organisations as well as within them, sharing and monitoring each other's ideas. Innovators from Edison to Einstein may have been viewed as independent inventors, but most have a large number of collaborators.

**Social innovations**

That innovations are a social phenomenon should not be surprising, as that point is well-established within scientific communities. The sociologist Robert Merton and his student Diana Crane pointed out several decades ago that scientific innovation took place in “invisible colleges” involving social net-

works of scientists across institutions. The ability to build on others' ideas, to triangulate one's own thinking against that of others, and to work collaboratively on projects, has long been a hallmark of academic science. We should only expect that the same approaches would work well in corporations.

There is only limited research to support the beneficial impact of knowledge sharing in the corporate domain, but what does exist is compelling. In one study, Michael Koenig, an information scientist, related the productivity of research in pharmaceutical firms to the openness of the organisation's information and knowledge culture (Koenig, 1992). He found that productive pharmaceutical R&D environments were characterised by:

- Less company concern about the confidentiality of company data.
- Greater openness to outside information, including greater attendance at external professional meetings.
- Researchers report a greater proportion of their information-seeking behaviour is directed toward browsing and keeping abreast.

Koenig's research suggests that the more an organisation shares with the external environment, the more it gets in return. This is not surprising. The more a scientist or researcher participates in external information and knowledge sharing, the more content he or she is likely to pick up. Scientists and other innovators have a natural desire to be recognised by their peers in their “invisible colleges”, so they have a strong motivation to share.

A preoccupation with protecting and

hoarding knowledge may actually prevent a company from creating new knowledge. Protection and creation are incompatible urges. The company that spends most of its energy hoarding and protecting its knowledge will have less energy for generating new knowledge and innovations in all aspects of its business. Innovative companies are generally those that do not rest on their intellectual laurels, but rather are constantly trying to come up with new ideas, products and services.

The social flow of knowledge benefits not only individual companies, but entire regions and societies. This point was made clear in Anna Saxenian's book, *Regional Advantage*, which compares Silicon Valley's success in information technology with Boston's Route 128 area. She points out in this seminal work that the Valley actually had a great regional advantage in the huge knowledge flows that occurred there based on loyalty to a profession rather than a firm, the nice weather that encourages people to socialise and chat, and the friendly social norms of California compared to reserved New Englanders. In Saxenian's forthcoming book, *The New Argonauts*, she describes how the substantial knowledge exchanges between Silicon Valley and India have enriched both regions.

### Stemming the knowledge flow

Attempts to restrict knowledge flow within an organisational or societal boundary usually fail. But that hasn't stopped people from trying. Before corporations became so large and influential, countries had a long and futile history of trying to force knowledge to stay within their borders. Until the Napoleonic period, both France and Belgium would impose a death penalty if they caught master lace workers going off to England to ply their trade.

Medieval guilds existed to try to limit the use of craft knowledge to members who would guard it very carefully and only pass it down to apprentices who had toiled for several years before they could practice independently.

None of these attempts were very successful in inhibiting the flow of knowledge across borders. The reason, of course, is that knowledge "walks". Unless it is possible to chain employees to their desks, knowledge will always flow outside the organisation.

Of course, some information and knowledge is amenable to secrecy or limited exposure. We are not advocating

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that pharmaceutical firms trumpet the chemicals in their new drugs or that Microsoft make all of its software open source. But we would bet that all of these categories would amount to only a small percentage of everything that can be called knowledge even in those companies. A great deal of knowledge is tacit, it is embedded in routines and processes, embodied in people and practices. Again, the only way to protect such tacit knowledge would be to lock up all employees.

The final reason not to protect knowledge is that it often doesn't do much good to steal it. Knowledge has economic attributes that make it a very different "thing" to information or other sources of wealth. Knowledge is context specific; even when you know how a firm does something, it is very hard to replicate it elsewhere. Many executives from Ford, for example, went to Japan and studied Toyota for a very long time and at great expense to try and duplicate some of its work practices. Toyota opened wide their gates, but Ford couldn't do in Detroit what Toyota did in

the Tokyo suburbs. In general, many companies around the world have had great difficulty implementing the Toyota Production System, although its principles are widely published. This is why many "best practices", though useful for illustrative reasons, are not ultimately implemented, because they don't come with sufficient context to be successfully applied.

To paraphrase Stewart Brand, knowledge wants to be free. It is always escaping the bonds that try to tie it down. Sooner or later, it gets to anyone who wants it enough. Smart, knowledge-intensive firms know this. For example,

McKinsey & Company, the consulting firm, often publishes its leading-edge and costly research in *The McKinsey Quarterly* and other publications with no loss of either intellectual advantage or position. Other consulting firms constantly worry about their secrets leaking out, but they have been substantially less successful. Like love, knowledge is something that when you give it away, you end up getting more in return.

### REFERENCES

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- Michael Koenig (1992) "The information environment and the productivity of research" in H Collier (ed), *Recent Advances in Chemical Information*. Cambridge, UK: Royal Society of Chemistry, page 134.



Thomas H Davenport and Laurence Prusak (left) are the co-authors of *What's the Big Idea?* (Harvard Business School Press, 2003).