

Storytelling and Other Organic Tools for Chief Knowledge Officers and Chief Learning Officers



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Storytelling and Other Organic Tools for Chief Knowledge Officers and Chief Learning Officers

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In 1997, IBM established the Knowledge and Differentiation Programme (K&DP) in Europe. Its objective was to experiment with innovative models and methods for the management of intellectual capital, both within and outside IBM. The success of the program was based on adopting a fundamentally different approach to that used in process improvement, quality management, and the like. The program's staff built on ideas drawn from anthropology, medieval history, and complexity science to develop a series of methods, including a highly creative use of the age-old art of storytelling, to build self-sustaining ecologies that facilitate the natural flow of knowledge between the formal and informal communities that exist in all organizations. This article was originally published as a chapter in "In Action: Knowledge Management and Learning" Dede Bonner (ed.) and is obtainable from www.astd.org. Readers should note that the Cynefin model has developed considerably since this chapter was written and more up to date material is available from The Cynefin Centre website.

At its most fundamental level, knowledge can only be volunteered; it cannot be conscripted. This simple statement has profound consequences: The organizational models of a volunteer community are radically different from those of a community of timeserving conscripts. It is necessary to create a culture in which individuals naturally, intuitively, and instinctively collaborate, or are allowed to choose not to. While a manager can enforce compliance with a process or set measurable performance standards for the provision and use of information, enforcement of knowledge exchange always fails, although it may generate camouflage behaviour. Managers can enforce compliance with process because the criteria for it are easily measurable within the normative framework of the organization. Knowledge cannot be treated in the same way. The creation and dissemination of knowledge is in the gift of the knowledge holder and is predicated on the existence of trust in his or her relationship with the knowledge user. Knowledge is triggered in context. It is ambiguous in nature; paradoxically both a thing and a capability at the same time in the same way as an electron is simultaneously both a wave and a particle.

No one should underestimate the difficulty of achieving the shift from a reengineered, downsized organization to the open networks of trusted communities and individuals that the knowledge economy requires (Willmott and Snowden, 1997). It requires a profound shift in thinking from the mechanical Newtonian metaphor of most management thinking to an organic metaphor. In that metaphor, the organization and its environment are treated as a complex ecology in which the degree of interdependency between units or agents, and the number of potential causal factors, defies formal structures and predictive models (Snowden, 1999b).

For the knowledge function, the issue is how to mediate this shift in thinking while managing pressure to deliver systems and results using the measures and expectations of the old models. Managing during a period of transition is both a privilege--it provides a chance to be at the creation of a new way of thinking--and a stress-inducing process of justifying new ways of doing things in an old and inappropriate language.

To understand this new organic metaphor, we will look at three basic questions that all organizations embarking on knowledge management have to answer:

- How do we find out what we know?
- How do we distribute that knowledge to a wider community?
- How do we ensure that informal knowledge is volunteered when it is needed?

For each of these questions, a conceptual model will be outlined to assist in structuring the issue. These models will be illustrated from experimental projects carried out within IBM over the past two years. In each case, lessons learned for the development of future practice will be identified. All of these are drawn from the author's direct experience as a user or creator. These experiences will then be used to draw conclusions about the chief knowledge officer's function.

Knowing What It Is That We Know

There is a fundamental difference between the management of knowledge and the management of information or process. In the management of knowledge, neither the individual nor the community is fully aware of the depth or range of its knowledge. It is true to say that we only know what we know when we need to know it; useful knowledge is triggered by events and circumstances. Asking an individual what he or she knows in isolation from the context of knowledge use just does not work.

Knowledge discovery then requires us to recreate the circumstances of knowledge use so that we can ask the question in context (Snowden, 1998). We can do this through the direct observation of knowledge use in day-to-day decisions and problem resolution. The K&DP sent consultants into the field to use techniques derived from anthropology in work with water engineers, supermarket shelf stackers, commercial buyers in the record industry, and merchant bankers. Observation worked when the business cycle was short. However, when the cycle time of knowledge use is measured in months or years, observation is not appropriate. Here it is necessary to recreate the historical context of knowledge use. The K&DP first faced this problem when a major lessons-learned project was initiated to improve international bid effectiveness within its services business (Aibel and Snowden, 1998).

IBM had already made the investment in process improvement with measurable benefits. All the mechanics of task definition, work flows, and authority mandates had been carried out to a high degree of professionalism, but there was still a major issue: how to best assemble and deploy the company's skills and capabilities from geographic-, regional-, and solutions-based units. The process models gave the appearance of providing the right skills at the right time, but the practice was radically different in different geographies. Common language too easily led to false assumptions of common culture.

Given that large international bids take many months from initiation to completion, it was not practical to observe the process of bidding to see knowledge being used, but the need to recreate the context of the original knowledge use remained: conventional interview techniques would fail. In addition, the danger of historical distortion was high. In sales, success is key to the status and earnings of individuals and teams. This means that in describing the past, history will be subtly changed through emphasis and de-emphasis (rarely through downright lies) to ensure that the story of the past meets the requirements of the present. In other words, the question itself colours the response and is better approached indirectly. The solution adopted was to go back to a very old human skill in conveying complex learning--the use of stories.

In accordance with previous practice in knowledge disclosure projects, a joint team was created made up of the IBM staff responsible for the support of international bids (in effect the clients) and K&DP staff. An initial workshop restricted to members of this joint team selected a series of previous projects (categorized roughly in two dimensions:

Business won and lost against a retrospective judgment of whether it was good and bad business). For each of these selected projects, the original bid team was identified and reassembled for a series of one-day workshops in different location. The role of the facilitator was to relax the group to the point at which the real stories came out, describing what actually happened. (Often accidents or coincidences were the main reasons for success or failure.) Questions from facilitators were designed to lead but not direct this discussion. The most successful assumed aspects of a class reunion with lots of humour, some of which was ironic. It proved vital to prevent teams from telling the story in a linear time sequence. Historical sequencing inevitably led to distortion as a pseudo-rational model was imposed on the past. For a successful team, this would mean downplaying luck and emphasizing planning; for an unsuccessful team the reverse would apply. The free flow of stories within the workshops revealed a considerable number of decisions that would not have been revealed through conventional interview and workshop techniques. Some of the most valuable material was admitted to have been lost to memory by workshop participants until a powerful or amusing story from another project team member triggered it.

As each workshop progressed, observers (who took no direct part in the workshop) noted every decision made or implied by the stories. These were consolidated into simple decision-information flow diagrams that K&DP facilitators presented to the workshop participants toward the end of the day. At this point, the facilitator introduced the language of intellectual capital. For each decision point or cluster, the participants were asked, "When you made that decision what knowledge was needed--explicit or tacit?"

At the completion of each workshop, members of the joint team used Post-It notes and coloured tape to consolidate the decision-information maps and the lists of knowledge assets on the wall of the 'war room' created for the duration of the project. These "human processors" rejected neat and tidy computer-based models for this stage. They were much more comfortable with incomplete and messy data, which they used to identify patterns and structures in the emerging picture that could be tested and validated.

The end result was an idealized model of the decision process and associated information flows for a bid and a consolidated register of knowledge assets used. Interestingly, K&DP staff had anticipated that this would result in two or three different models for different types of service provision. In practice, a single model satisfied all types as the right level of granularity naturally emerged from the storytelling process.

The lessons learned project was important in the developing understanding of knowledge disclosure techniques. For the international bid support staff in IBM, it meant that it had a deployment model for future sales to ensure that the right knowledge was in the right place at the right time with associated improvements in win rate and as importantly in bid-cost reduction. For the K&DP, the use of storytelling opened up new areas of work. Subsequent engagements both within IBM, and external to IBM, resulted in the following learning:

- Storytelling allows the exploration of might-have-beens as well as what happened. This means that a larger range of knowledge can be explored: not just the knowledge that individuals used, but also the knowledge that they might have used (or needed).
- More knowledge disclosure results from asking a successful team to construct the story of its failure than from reviewing its success. The team identifies three or more turning points at which a minor change would have resulted in an alternative outcome. It then constructs three alternative histories of failure. This method both explores fictional space and reveals more assets, but more important, it prevents successful teams from ignoring the elements of luck and serendipity that made them successful. Awareness of these components is key to subsequent reuse.

- The mirror image of this is to ask a failed team to construct alternative histories of success. Failure is often more valuable than success in learning, and removing the inhibition to knowledge transfer for these teams is vital.
- It is best to videotape a story workshop and then identify the knowledge disclosure points (decisions, judgments, and problem resolution). Observers tend to distort what they hear.
- Story is not just a means to disclose knowledge, but also a means to achieve change and convey complex meaning to culturally diverse groups (Snowden, 1998). The insight achieved on this project was subsequently applied in a major project on story technique, one application of which is covered in the next section.

Distributing Knowledge to a Wider Community

If storytelling can be used to disclose knowledge, then it can also be used to communicate it. The lessons-learned project, one of the first uses of story in knowledge management, excited interest both within IBM and outside the company, mainly as a result of a mention in an article in *Fortune* (Stewart, 1998). As a result of that article, a group of IBM staff members from research, education, and the K&DP in Europe came together in a series of meetings to develop a formal method for the use of stories (Snowden, 1999c). The model of figure 1 is based on two fundamental insights:

- A distinction between an anecdote captured in the field through observation or the story elicitation techniques described in the previous case.
- Recognition that stories represent underlying values or rule sets that provide the self-organizing capabilities of the communities that they represent.

There is huge value in capturing and distributing anecdotes within a company. At 3M, such activity is seen as moving beyond the "laziness of bullet points" to the greater complexity and context setting of narrative form (Shaw, Brown, and Bromiley, 1998). Many companies are hiring actors and scriptwriters to improve their executives' presentation skills and capabilities. This involves decomposing a story into its component parts to allow improved storage of story elements as well as providing models for individuals in companies to create more compelling stories (Orton, 1995). It is rather like providing the amateur artist with an articulated model to assist in drawing life models or more prosaically a connect-the-dots picture-drawing guide.

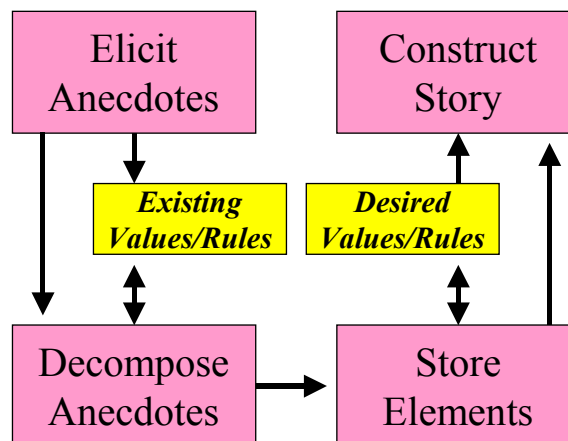


Figure 1. From anecdote to purposeful story

However, this is not enough. Stories created by scriptwriters may be compelling, but that is not the same as convincing. One of the discoveries in the story project was that the capture of a critical mass of anecdotes enables the extraction of the value or rule set that underlies the behaviour of the community in question. This is powerful both in its own right and because it allows the creation of stories based on desired values. Such stories may be created from an individual anecdote and enhanced through the process of decomposition and construction. They may also be created using elements from many anecdotes.

One recent project at IBM illustrates the value of stories in communicating knowledge. IBM Global Services has more than 100,000 professional staff to be trained in the use of

common work products. With the growth in numbers of staff, it was no longer practical to conduct all of this training in a physical setting. Accordingly, a goal was set to deliver 30 percent of internal training through distance learning, with anticipated savings in 1999 alone of \$100 million.

In practice, interaction between trainers and trainees has been necessary, and will always be necessary, for effective knowledge transfer. Knowledge is contextual. It is acquired through experience, and the closer the experience is to the acquisition of the theoretical constructs, the better. However, trainers can use their position in relationship to the trainee as a means of exerting power to ensure conformity and lack of future threat, through assessment, qualitative ratings, and restriction of access to necessary experience. In a virtual environment, such issues of power are mitigated, but the loss of intimacy with the trainers has traditionally been seen as a worse sacrifice.

In this particular project, storytelling came onto the scene late in the day. The basic structure of the training and the vast bulk of the work of codification had been complete. However, there was a desire to make the course more effective. A junior consultant within the K&DP was placed on the existing non-virtual course as a trainee. She captured the trainers' anecdotes. These were powerful as they had been refined through telling and retelling over the years. Decomposition techniques were used on those anecdotes to identify the main components. From this mass of material two things were extracted:

- The underlying values and unarticulated rules of behaviour implied by the anecdotes were extracted and represented.
- A series of archetypal characters--Jason the young Harvard Business School graduate, the ambitious practice leader, the thoughtful client, the experienced practitioner--were identified.

The values and rules were checked against the desired values and rules. The archetypal characters were then used to construct a short and developing story using a soap opera format (the circumstances change but the characters don't). Scenes of this story were used at the start of each module to convey key learning through the subtext. The use of subtext is one of the main strengths of a story. Few individuals react well to being told explicitly what they should do. A story in which the same message is conveyed indirectly through the subtext is more effective

The story was delivered as a voice recording from a single narrator, reinforced by cartoons. The use of the story meant that participants increased the speed with which they went through the training modules: The subtext of the story improved their comprehension of the training messages, and more humanly, they wanted to know what happened next! The successes and failures of the characters also provide a growing body of specialist language that can be used in subsequent engagements with people who had been through the same program. "Doing a Jason" can convey a very complicated series of references when you have spent several months of your life following Jason's attempts to make all life robotic and overly rational.

The use of storytelling will also allow us to move beyond multiple-choice questions as the only cost-effective means of scoring trainees' assignments when the volume requires computer scoring. Each of the story elements of Jason, Tom, and their colleagues was carefully constructed to contain key phrases and word combinations linked with key behaviours. Course participants will now be able to write an episode of the Jason story using their own experience. That episode can then be analysed for occurrences of the key words associated with that module. Too many associations, and we have a parrot not a consultant. Too few, and we either have a genius or someone who just hasn't got it. It is at the extremes that we use human assessors, the rest pass.

Storytelling has provided a powerful tool in the knowledge management arsenal. Other applications include:

- Crafting cultural change programs. In one case, a story was constructed using a myth format from material gathered over two weeks in three workshops. The pervasive and compelling story was first told around a water cooler in the head office at lunchtime on a Wednesday. By the close of business on Friday, it had been retold in 600 branch offices.
- In a merger or any form of new partnership, anecdote extraction from the company being acquired allows extraction of the value set of that organization (or sub community). Stories can be created from the anecdote base of the acquired company using the values of the acquiring company. This means that executives briefing staff (who are vulnerable to loss of identity post-acquisition) can be told the “right” stories from their own common history by incoming executives.

There are many other possible examples. Storytelling is a pervasive technique that triggers the memory of knowledge and triggers a desire to acquire knowledge. Coupled with metaphor, it can convey complex ideas in simple memorable forms to culturally diverse communities far more effectively than other mediums.

Informal and Formal Communities

Without exception, all commentators on knowledge management agree that trust is a key aspect of knowledge flow. For many it is a precondition. Admission of failure is a key learning for organizations and requires individuals within the organization to be honest about their failures. For each individual this will be relatively easy with trusted colleagues in informal networks, but virtually impossible in formal communities. Moreover, informal communities, given the opportunity, will naturally create knowledge artefacts to distribute learning within their trusted networks. From projects carried out over the past two years, such artefacts can include such an informal method as a ledger that field engineers store in the café where they take breaks and use to pass information.

The consultancy arm of IBM Global Services is a complex ecology of formal and informal groups existing across many cultural, geographical, and political (internal) boundaries. In order to make sense of this diversity--diversity in which informal and formal knowledge collaboration had evolved with some design--the Cynefin model in figure 2 was developed. Cynefin is a Welsh word that has no direct equivalent in English. It implies a sense of place and belonging rooted in the history and spirituality of a community.

The model has two dimensions.

- *Culture*: Contrasting formal, training-based, hierarchical cultures with those that are informal, learning-based, networked, and relationship focused.
- *Sense making*: Contrasting communities that restrict their membership by use of a shared common expert language, with those whose language is either commonplace or where the situation is sufficiently new and different that no expert language has yet developed.

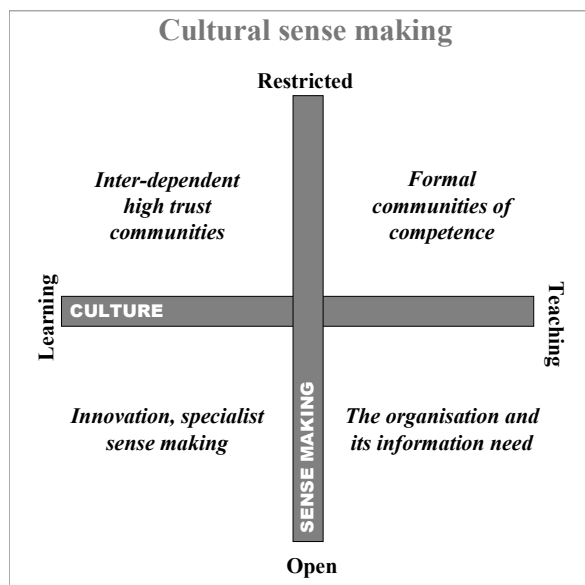


Figure 2. Cynefin: Cultural Sense Making

This model is more fully described elsewhere (Snowden, 1999b). Here we will use it to look at the management of links between formal and informal expert communities, at the top half of the model.

Communities of competence, also called communities of practice, are important in knowledge management. Many organizations focus rightly on providing support to such communities, which comprise individuals with common interests, education, and training. Such groups are very powerful. They share an expert language created through that education and experience. This means that information is shared at a higher level of abstraction, and consequently with a lower cost of codification. However, once a system is created, such communities become part of the formal organization and are susceptible to the dynamics of formal and explicit structures. This means that the nature of an individual's participation becomes a component of his or her formal career progression or survival within the organization. There are many indicators and consequences of this; the most educative is the lack of willingness to admit mistakes.

With honourable exceptions, mistakes admitted within formal environments are restricted to those designed to prove the brilliance of the originator. Serious mistakes or potential mistakes not yet committed as a result of some weakness or inadequacy will not be made visible. Such inhibition restricts the learning capacity of the community. In contrast, most individuals in an organization belong to private networks. These are relationships built over time through mutual experience and tests of loyalty in which the individuals become interdependent. Such networks are the real dynamos of the organization, and it is important to make their knowledge more widely available. The problem is that it has to be volunteered.

IBM allows any individual or group of individuals to set up a private collaborative environment, subject to a token internal charge to cover costs. There are thousands of these workrooms (a simplified version of a Lotus product). For the past three years, the K&DP has owned one of these and limited admission to those who are trusted. That team room contains working material, errors, mistakes, and learning. It has been reformed at least once when a member proved unworthy of that trust and was excluded without really being aware of it. The old team room was left in place, and a new one was created in parallel with a more limited membership.

One of the things that the K&DP has been working on is the use of storytelling for tacit knowledge capture and distribution. The existence of this work was flagged through a simple document posted in the formal competence area indicating the subject area and possible uses, but the detailed workings, mistakes, and failures essential to method development were not. This simple document made the formal community aware of the activity without having access to the detail. As storytelling became a hot topic in knowledge management, this awareness resulted in an early trickle of emails asking for details, which were readily answered. But as storytelling became more fashionable the email volume increased to painful levels. At this point, a substantial document was written and posted to the formal community answering the most frequently answered questions and suggesting possible uses and abuses. Codification took place at a point at a time at which the socialization pressure of the ecology forced the owners to volunteer knowledge at an appropriate level of abstraction. Had this only been allowed in the formal competence grouping, then either the document would have been academic, cautious, and lengthy, or the work would have happened on a private Website, in meetings, or via one-to-one communication with attachments over the email.

In this example, the formal and informal organizations share a common technology and environment, but the need for privacy and trust of the informal communities are respected and protected. The result is that the knowledge is more readily volunteered. Future developments would allow the thousands of workrooms to be electronically searched in order to identify incidences of key works associated with a current program. The owner of the workroom would then be contacted to ask if the members of that workroom could assist. The content should not be directly accessed, as that would breach the trust critical to a volunteer community. The paradox is that maintaining strong boundaries between formal and informal communities means that knowledge flows across the barrier increase due to the confidence of the informal members that

their trust will not be betrayed. Trying to break down the barriers may offer a superficial appearance of success, but the valuable knowledge will have gone underground.

Whether designed or accidental, this clear willingness to trust employees to reveal knowledge when it is needed also demonstrates considerable maturity in respect of the intellectual capital of the wider organization. By allowing communities to organize themselves around private knowledge, the cost of formal communities is substantially reduced. In initiating and sustaining interventions of this form, the CKO also makes a strong statement about the nature and values of the knowledge program that he or she wishes to sustain. In IBM there are more than 40,000 workrooms and just over 40 formal competence groups--the right ratio of formal and informal.

Shaman and the Storyteller

Following are two cases of the use of storytelling and one of using private space to create a self-organizing ecology for the valuable knowledge of an organization. What all three have in common is the metaphor shift from mechanical to organic. Over the last two years, the importance of this shift has been emphasized time and time again in a series of K&DP engagements both inside IBM and outside the company. Knowledge management requires a switch in thinking from the development of prescriptive and universal models to ones that enable the community to accurately describe itself and its environment. The sheer volume of knowledge in even a small organization is too vast to organize in predefined forms; self-organization is key both for effective knowledge use and to keep costs and expectations within acceptable boundaries. Machines are built for a purpose and for a predicted range of circumstances. Under the mechanical metaphor, the CKO is the chief engineer: the individual who maintains and builds the engine of intellectual capital that drives the organization. There is some value in this metaphor, but its use is limited. The great transatlantic liners of the early 1900s relied on their engineers and on the near slave labour of the stokers, shovelling coal into the furnaces in hellish conditions. The economic conditions of the time meant that there was little option, as the alternative to dehumanised labour was starvation. Now we have the knowledge economy--a volunteer environment.

In a volunteer community, leadership is won by example and capability, but cannot be imposed. In consequence, it can be argued that the appointment of a CKO is a mistake. The very use of the word officer implies a false relationship. This view is supported by many of the early CKOs. Interviewed in a research program at the London Business School, they stated that one of their main objectives was to manage themselves out of a job. In far too many cases, the CKO title is simply a grander title for that of chief information officer, or in a parallel development training managers morph into chief learning officers. This type of cynical manipulation abuses the intelligence of the knowledge holders with inevitable consequences for collaboration and learning within the organization.

For the complex ecology that is the modern organization, there are no simple answers, but there are some guiding principles. The author offers the following based on his own experience and reflection of a decade of work in this domain with several hundred companies. They are not absolutes, they are subject to change, and they are generally based on metaphors designed to trigger greater understanding. They are designed to stimulate thinking and thereby increase self-awareness.

- In any large organization, the appointment of a CKO may be the only means by which sufficient focus can be achieved to drive the investment needed to create knowledge ecologies. The larger and more bureaucratic the organization, the more this is true. In smaller or more dynamic organizations (and in the large ones over time) full-time knowledge roles should be associated with junior and trainee positions and should be low status. A CKO with the authority of the board can direct or mandate behaviour. A junior has to gain collaboration from more senior people. Hierarchical bureaucracy may require authoritative interventions to get

things moving, but sustainability is achieved when knowledge officers are servants of the servants. They can only be successful if they enable volunteers.

- The CKO is a cartographer. He or she is not the custodian of the organization's knowledge, but the mapmaker, the one who knows the location of the knowledge and the routes by which it can most effectively be used. Mapmaking in knowledge requires the direct observation of knowledge in action, or its simulation through story. A cartographer understands the correct scale at which a map should be drawn and can create universally understood symbolic representations of complex ideas for use in the map. Cartographers understand that a longer route via a series of valleys is more effective than striking out across a series of high mountain ridges. They know the natural flows that will ease the passage of knowledge.
- Stories are a disclosure device for knowledge and a means by which knowledge can be communicated. The stories present in all organizations incorporate the history of that organization and are a determining factor in its capability. The CKO who becomes the custodian of the corporate stories possesses the power of influence by managing the subtext of corporate communication. The CKO has the role and responsibilities of the wandering bards of early Celtic tradition: They are welcome at the feast for the stories and wisdom they bring, but they do not have the authority and responsibilities of the tribal chief.
- Managing knowledge is about managing complex ecologies. The intelligent CKO will not seek to impose a single model or over rational solution. He or she will create dynamic, multitoolled infrastructures in which the rights of privacy--the right not to volunteer and not to be punished as a consequence of exercising that right--are rigorously guarded. The CKO will ensure that the right rituals and rewards are in place to ensure that communities maintain an identity and resilience in the face of uncertainty. They will act as the conscience of the community, ensuring that its leaders do not abuse authority and remain loyal to the underlying beliefs and objectives that are at the heart of the community. They will act in the role of the shaman in a nomadic tribe of hunter-gatherers, custodian of its values and its relationship to the environment on which it depends for sustenance.

Servant, cartographer, storyteller, and shaman--all are roles that achieve authority through the influencing power of knowledge and wisdom. In the initial stages of a knowledge program, it may be possible (and sensible) for a single individual to manage as a directive leader. As soon as possible, however, the role needs to become a pervasive element of the entire ecology, and at this point authority has to be won through the respect of the community--volunteers all.

Questions for Discussion

1. What stories are told in the organization to new employees? How long does it take to acquire the key stories when you join? What underlying values are evidenced by the stories? (If you ask this question of colleagues and new employees, using a tape recorder and following oral history techniques, you will find it illuminating.)
2. Identify a group of professionals within your organization. Start by asking them what they know in isolation. When you have done this, try an alternative approach. Ask them to tell stories of ways in which such decisions have been made in the past--good and bad. Then for each decision set, ask a different set of questions: What artefacts (processes, databases, and documents) did you use? What skills were necessary? What heuristics or rules of thumb do you use to validate the decisions made or to make the decision in incomplete or partial data? What experience have you had that enabled you to make the decision? What natural talent is required?

3. Now compare the results from the two methods in question two and identify ways and means by which the underlying culture or values evidenced by question one can be used to facilitate knowledge retention and distribution in question two.
4. Use the model in figure 2 to identify types of community that exist in your organization. Consider ways in which informal communities overlap with formal communities. What sorts of tension are created as a result? Can you think of examples where enthusiastic but naive management tried to get everyone to trust each other? What were the consequences?
5. Think of the different responses of a human and a machine to a sudden and adverse change in the environment. How do they both cope? What does this teach us in constructing the organizational models of the future?

References

- Aibel, J., and Snowden, D. (September 1998).** "Intellectual Capital Deployment: A New Perspective." *Focus on Change Management*, pp. 13-18.
- Orton, P.Z. (1995).** *Effects of Story Strength Elements and Interactivity on Audience Interest in and Liking of Story Dissertation*. Department of Communication, Stanford University.
- Shaw, G, Brown, R., and Bromiley P. (May-June, 1998).** "Strategic Stories: How 3M Is Rewriting Business Planning." *Harvard Business Review*.
- Snowden, D. (March, 1998).** "I Only Know What I Know When I Need to Know It--Embracing the Active Management of Tacit Knowledge." *Knowledge Management*, 1(4) [Ark Publications], 6-10.
- Snowden, D. (March 1999a).** "Story Telling: An Old Skill in a New Context." *Business Information Review*, 16(1), 30-37.
- Snowden, D. (October 1999b).** "Liberating Knowledge." In *Liberating Knowledge*.
- Snowden, D. (November 1999c).** "The Paradox of Story: Simplicity and Complexity in Strategy." *Scenario and Strategy Planning*, 1(5), 16-20.
- Stewart, T. (1998, September 7).** "The Cunning Plots of Leadership." *Fortune Magazine*.
- Willmott, H., and Snowden, D. (1997).** "Knowledge Management: Promises and Pitfalls." *Mastering Management--The Reader 8*, [Financial Times], 17-22