

# Making Sense of the Knowledge Era

## *13 Myths of Knowledge Management*

Stephen Denning

I was recently invited to a conference where participants were asked to write a paper addressing the question, "***Why aren't knowledge-based organizations a reality?***"

This question was said by the organizers to be based on the ***premise*** that "knowledge production and mobilization (are) the *raison d'être* for organizations, explain how competitive advantage flows from the creation, ownership and management of knowledge assets, and champion the transformation of social capital into intellectual capital."

Everyone was asked to write a paper. So I decided to address their question directly. My hypothesis was that ***the prevalence of some myths surrounding knowledge and knowledge management not only prevent knowledge-based organizations from becoming the reality that was promised but also tend to get in the way of effective discussion of the issues.***

I use "myth" in the sense of "a fiction or half-truth, especially one that forms part of an ideology." I advanced my hypothesis in the spirit of the organizers to "think out loud," and "float a trial balloon", as well as to "build links between ideas." I was thinking that if I was proven to be wrong, then at least I would have stirred up debate in a domain that in recent years has been more somnolent than exciting.

### ***Some prevalent myths about KM***

#### **A. The nature of knowledge**

##### **1. "Knowledge is always a plus"**

It's true that knowledge is ***generally*** a plus when the firm is doing "more of the same", but is it so, when it comes to transformational innovation? In disruptive innovation, knowledge is often a handicap. The people who know how things are done around here, the official experts, generally know why disruptive innovation won't work. They have market research, studies showing the technology isn't proven, that necessary competencies are lacking. And what do the innovators have?

A mere dream of how the world could be different: for instance, a world in which hundreds of millions of people might fall in love with an iPod. This wasn't knowledge. It was a hunch, a surmise, a guess by Steve Jobs. In disruptive innovation, knowledge can be a barrier, not an asset.

## 2. "Knowledge is sticky"

Many writings dwell on how hard it is to transfer knowledge: knowledge is sticky. Yet John Seely Brown showed this is also a half-truth. The paradox is that **knowledge is not only sticky: it's also very leaky, particularly high-value knowledge**. In fact, high value knowledge tends to fly out the door at the speed of light, as Xerox PARC found.<sup>1</sup> It's often low-value knowledge that is sticky – with peons hanging on to their little piece of knowhow in the hope that it might give them job tenure for just a few more hours. Meanwhile high-value knowledge flies out the door, often because the management isn't listening and doesn't realize what riches it has.

## 3. "The concept of knowledge is infinitely extendable"

When I was at school, knowledge was "true, justified, belief." Then Michael Polanyi told us about tacit knowledge. More recently, the KM literature tends to include in knowledge, insights, hunches, surmises, educated bets, business models, strategies, scenarios, whatever. Do we know what is knowledge?

In fact there seem to be at least four very different concepts of knowledge floating around.

### A. Classic philosophy: Knowledge is justified, true, belief.

In mainstream Anglo-Saxon philosophy, knowledge is generally taken to be some variation on: "justified, true belief." This view stems from Part 3 of Plato's dialogue, *Theaetetus*. Thus something is knowledge if it is believed, true and if the person is able to "give an account" i.e. can justify it. Various refinements and nuances (e.g. Gettier examples<sup>2</sup>) continue to be discussed, but basically the idea the knowledge is some variant of "justified, true belief" remains the mainstream view in Anglo-Saxon philosophy.

### B. Polanyi's view: knowledge is basically tacit.

In *Tacit Knowledge* (1966), Michael Polanyi put forward the notion that knowledge is basically tacit. Polanyi gives as an example:

In a lab experiment, subjects are given electric shocks after watching some groups of syllables flashed at him. After a while they can predict whether or not he is going to be shocked, even before they can articulate the principle underlying the shock/non-shock pattern. According to Polanyi, it is "obvious"

that this is knowledge: the man knows the pattern, even though he cannot say what it is.<sup>3</sup>

This view raises several issues.

First, there are objections from the classic philosophic viewpoint. As Plato wrote in the *Theatetus*: (p.202c): "Now when a man gets a true judgment about something without an account, his soul is in a state of truth as regards that thing, but he does not know it; for someone who cannot give and take an account of a thing, is ignorant about it."

The philosophers' conclusion seems to be that it is "obvious" that all knowledge is explicit—the exact opposite of what Polanyi views as "obvious".

Second, does Polanyi extend his theory to animals? For instance, amoebas demonstrate by their behavior that they can distinguish between food and non-food, just like the human subjects with electric shocks. Neither is able to articulate their knowledge, but for Polanyi, conscious awareness of knowledge seems to be irrelevant. Is Polanyi saying that amoebas have knowledge? If so, philosophers would say: this is obviously wrong.

Third, is Polanyi saying that explicit knowledge is not real knowledge? Suppose a physics professor understands the physics of riding a bicycle but can't ride one himself. Is Polanyi saying that the professor has no real knowledge of riding bicycles? If yes, philosophers would say: this is nonsense.

Fourth, there is the problem of the obscurity of Polanyi's prose. Look at a typical Polanyi sentence: "Subsidiary or instrumental knowledge, as I have defined it, is not known in itself but it known in terms of something focally known, to the quality of which it contributes, and to this extent it is unspecifiable."<sup>4</sup> After pages and pages of sentences like this, can we be sure that anyone knows what Polanyi really thought?

### **C. Nonaka: knowledge can be either explicit or tacit**

Polanyi's view of knowledge didn't seem to make much headway with professional philosophers. But along came Professor Nonaka in 1995 with his view in *The Knowledge-Creating Corporation* that knowledge can be *either explicit or tacit*. According to Nonaka, tacit knowledge can be "converted" into explicit knowledge. And explicit knowledge can become "internalized" as tacit knowledge. This view was widely adopted in KM: e.g. Davenport & Prusak and many, many others.<sup>5</sup>

As to Nonaka's view of tacit knowledge, the same classic philosophic objections apply to tacit knowledge as they do to the Polanyi view of it: to the classical philosopher, it is "obvious" that tacit knowledge isn't real knowledge because it doesn't have "an account".

Then there is the objection from the Polanyi supporters that Nonaka and his legion of followers are “confused” or “mistaken”: they have “misunderstood” Polanyi. According to the Polanyi school, to reduce what is known to what can be articulated amounts to impoverishing the notion of practical knowledge. Polanyi said that it is impossible to articulate practical knowledge explicitly in rules, principles, maxims, because real knowledge is to some extent “ineffable”. Hence Nonaka and his followers have “obviously” got it all wrong.<sup>6</sup>

A third objection is that knowledge, so defined, includes too much—insights, hunches, surmises, educated bets, business models, strategies, scenarios, practically everything except the kitchen sink, so that it is wildly out of touch with any common sense use of the word, “knowledge”. It seems that anything that could conceivably add value or have something to do with the mind is “knowledge”. So long as this was some obscure philosophical theory, one might say: “who cares?” But when many large corporations start basing knowledge management programs on such a view, then it has real world consequences. Thus things that few people would dream of calling knowledge are put forward in KM programs as “knowledge”, thereby risking bringing those KM programs into disrepute.

#### D. John Seely Brown: knowledge must be both explicit and tacit

All these objections can be avoided by adopting an even narrower definition. Thus John Seely Brown seems at times to imply: “You only really know something if you have **both** explicit **and** tacit understanding of it.” E.g You don’t really “know” Newtonian physics unless you can **both** solve the equations **and** have a feel as to what will happen if you drop a stone from an airplane.<sup>7</sup> You don’t have real knowledge about riding bicycles you have to know both how to ride a bicycle and the relevant laws of physics. The problem on this view is that hardly anyone knows anything. There is practically no knowledge at all in the world, which is also absurd.

Where this does this leave us? There are four very different concepts of knowledge floating about.

	Is it really knowledge?			
	Classic view	Polanyi	Nonaka	John Seely Brown
“Knowing that” (explicit)	X		X	
“Knowing how” (tacit)		X	X	
Both “knowing that” and “knowing how”	X	X	X	X

Which is correct? One is tempted to conclude, as Plato in effect does at the conclusion of Theaetetus: “Beats me!” While this may be a viable position for a

philosopher to adopt, even the world's most famous philosopher, it's a recipe for utter confusion when applied to a knowledge management program in a large corporation. At a minimum, one would think that KM people should be explicit about which concept of knowledge they are using and why—something I rarely see in practice.

## **B. The nature of knowledge sharing**

### **4. “Knowledge can be transferred”**

Looking back, I have often talked about “knowledge transfer”, but it is surely right to say that strictly speaking it isn't possible. Information can be transferred. Knowledge requires internalization by the “receiver”. Hence talk of transfer of knowledge is a misleading account of what is occurring. “Sharing” seems to me a better term, since it implies that the “sharee” needs to take some active step to internalize the knowledge, before the sharing is effective.

### **5. “Knowledge-sharing is always a good thing”**

The literature usually assumes knowledge-sharing is always a good thing, overlooking situations where confidentiality or risk of abuse make it problematic. I was struck by Reed Stuedemann's presentation of Caterpillar's Knowledge Network to the SIKM network, which showed some neat features by which staff and clients could find the summary of anything in the entire knowledge base, but the owners of each knowledge space could control who got access to the full text. Thus control is part of effective sharing. Knowledge-sharing isn't always a good thing.

### **6. “Knowledge is more important than values”**

In listening to accounts of successful KM programs, I've been struck by the role of values. In one presentation, Raj Datta of Mindtree talked for almost an hour about KM and the word, “knowledge”, hardly came up. The whole focus was on demonstrating, instilling and communicating the value of sharing openly throughout the organization. That got me wondering whether we may be talking more about “values management” more than “knowledge management”.

Thus Mindtree Consulting launched a persistent multi-year effort to establish five values as the dominant values of the organization:

- Caring – requires empathy, trust; needed to enable sharing and individual push of knowledge
- Learning – required for individual pull of knowledge

- Achieving – high performance requires resourcefulness and heavy reliance on knowledge
- Sharing – active cooperation; requires fair process, openness, transparency.
- Social Responsibility – an outward extension of all the above values

The focus on values greatly facilitated the implementation of knowledge management in the firm.<sup>8</sup>

### **7. “People always want to have better knowledge”**

Common sense might suggest that self-interest would push people to want better knowledge. But while the desire for better knowledge is evident *within* a discipline or community of practice, it is less so *between* disciplines or areas of expertise. Putting in place arrangements that will facilitate sharing within the discipline is an important step in KM. But this should not blind us to the reality that, when it comes to learning from different disciplines, the interest in learning is not always evident.

### **8. “The task of KM is to enhance the supply of knowledge”**

Supply of knowledge has always been fairly plentiful. Libraries have been available for millennia but there are rarely lines of people waiting. The web obviously makes access infinitely easier and quicker, but it does nothing to enhance demand. If we look at the many debacles in the private and public sector of the last decade, better knowledge was generally staring decision-makers in the face. The problem was lack of demand. Until the demand side of knowledge is addressed, it is hard to see how enhancing the supply of knowledge will make much difference.

### **9. “There are structural solutions to the lack of demand for knowledge”**

The hope seems to linger on that somehow, if we can just find the right organizational arrangement, the right directive, the right top-down decision, the right mix of carrots and sticks, the desire to share knowledge will somehow grow, expand, even explode. This faith is similar to the faith in the Tooth Fairy, and equally misleading.

## **C. The impact of knowledge sharing**

### **10. “Knowledge management will transform the business landscape”**

Back in the mid 1990s, many of us sensed that KM might change the business landscape. Well, KM did indeed arrive, but it’s hard to see the business landscape as

transformed. Based on where CKOs are in the corporate pecking order, firms apparently regard KM as a modest competence, somewhere on a par with running effective inventory control. Every good company needs one. It lowers costs. If you don't have one, you need to be more efficient in other areas to be competitive. But inventory control doesn't transform the business landscape. And neither do most KM programs.

### **11. “KM succeeded and no one knows it”**

KM, it is said, has been internalized into organizations and so now it's like the telephone – something you take for granted. This of course was not what was promised in the hyperbole about KM transforming the business landscape, or “the very *raison d'être* of organizations and their competitive advantage”. Here KM seems a bit like God, nowhere visible but everywhere present. On an evidence-based viewpoint, shouldn't we recognize that there has been some hyperbole and that KM is a necessary but modest competence?

### **12. “It was the IT vendors who killed KM”**

Some say hawking by IT vendors caused people to believe they could buy KM in a box; when they found it wasn't so, the backlash undermined the whole KM movement. There is a grain of truth here, but as a total explanation of what ails KM, no more than a half-truth.

### **13. “Knowledge is the only sustainable competitive advantage”**

What is the evidence for this pervasive KM mantra? Is it true? What about smarts? What about courage? What about values? What about imagination? What about an ability to innovate? If high-value knowledge is leaky, how sustainable is competitive advantage based on it? One could make a reasonable case that KM can make doing “more of the same, cheaper, quicker and better” generally more efficient, but does it generate a sustainable competitive advantage? I have yet to see the evidence for KM as the driving force behind transformational innovation.

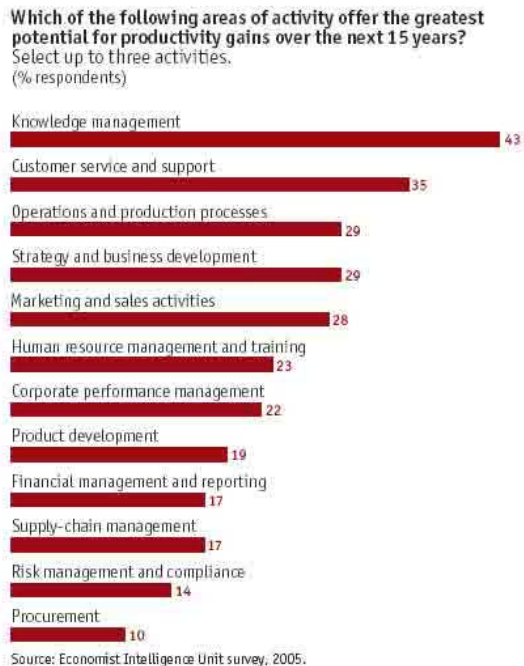
Of course, if you define knowledge very broadly, as Nonaka does, to include practically everything—insights, hunches, surmises, educated bets, business models, strategies, scenarios, even values—then sure, knowledge is the basis for competitive advantage. But that doesn't tell us much.

## ***The Way Forward***

It is not that the propositions cited above are totally wrong. Most are partly correct. But they are also partly incorrect. And they are widely believed and pervasive in the literature.

So the way forward in KM is to be more nuanced, more accurate, more precise in what we say and how we talk about knowledge and knowledge sharing, along with perhaps more than a soupcon of modesty in what we claim and predict.

Is this the way forward? I am not arguing here that KM is nonsense or that it should be closed down. I do believe that KM is an essential part of most, if not all, organizations. How big a role will it play in future? On a positive note, I was struck by the recent 2020 Foresight report issued by The Economist Intelligence Unit.<sup>9</sup> It's a survey of 1,656 senior executives from around the world in late 2005:



Apparently many senior executives are still expecting big things from KM. If we are not to disappoint these expectations, then getting our own house in order and freeing it from some of its pervasive and debilitating half-truths will be a key part of the way forward.

How big is it likely to be? To get a handle on this issue, it might be useful to go back and have another look at the book that in some ways launched it all.



## ***Peter Drucker and the Knowledge Era***

Peter Drucker's book, *Post-Capitalist Society* was a startling book when it was published in 1993 and it is still quite thought-provoking to read it again today. The book presented an apocalyptic vision of the world economy: a new era was appearing. He called it the knowledge era, although he never explicitly defined "knowledge".

In the new era, according to Drucker, the basic economic resource would be knowledge—which seemed to include an ability to manipulate ideas and innovate. The leading social groups would be knowledge workers. The key economic challenge would be the productivity of knowledge work and the knowledge worker. The result, he said, would be a transformation of the world: "as profound, devastating, far reaching, and unimaginable," as the Industrial Revolution.

Even more scary: for those who had eyes to see, the revolution was already happening.

How did Drucker arrive at his apocalyptic conclusion? To simplify his argument, it had three main parts:

- In the 19<sup>th</sup> Century, the winners were those who could apply knowledge to tools, processes and products.
- In the 20<sup>th</sup> Century, the winners were those who could apply knowledge to work.
- In the 21<sup>st</sup> Century, the winners will be those who can apply knowledge to knowledge itself.

Thus in the 19<sup>th</sup> Century, knowledge was applied to tools, processes and products. The domain was the machine and the factory. Machines expanded economic capacity. Economic growth occurred, but almost all the benefits of growth went to the owners of capital.

This is because the productivity of labor didn't increase significantly. The workers were no more productive than they had been in the workshops of ancient Greece or Rome. So the pay for workers didn't improve in the 19<sup>th</sup> Century. At the end of the century, there was a prospect of class war.

Thus the winners in the 19<sup>th</sup> Century economy were those who could command and control "stuff"—the hard material things of the economy: the owners of land, industry, manufacture and mines.

Around the turn of the 20th century, knowledge began to be applied to work, as a result of scientific management launched by Frederick Taylor. Productivity of labor

grew around 4% a year, thus doubling every 18 years. Since Taylor, productivity grew some fiftyfold in advanced countries. This provided the basis for the increases in the standard of living in the developed countries, thus averting a class war.

The winners in the 20<sup>th</sup> Century economy were those who could command and control ideas i.e. what Richard Lanham calls “fluff”.<sup>10</sup> The relevant domains were traditional management, “more of the same” innovation (better, cheaper, quicker), data management, data mining, training, cost reduction & downsizing, central planning & programming, incentives & disincentives and oligopolistic marketing. We are in the world of ideas here, but we are still using command-and-control techniques.

In the 21<sup>st</sup> Century, according to Drucker, knowledge would be applied to knowledge itself. “Knowledge is now being applied to systematically and purposefully define what new knowledge is needed, whether it is feasible, and what has to be done to make knowledge effective. It is being applied, in other words, to systematic innovation. As a result, knowledge has become **the** resource rather than **a** resource...This fact changes – fundamentally – the structure of society. It creates new social, economic and political dynamics.”<sup>11</sup> Command and control won’t work in this new era, because the workers own most of the means of production—knowledge. Instead, one has to proceed through leadership by persuasion and inducement.

According to Drucker, the winners in this new game will be those who master knowledge about knowledge. The new competitive arena includes universities, libraries, the arts and the humanities, but also: learning, knowledge sharing, “knowledge worker” organizations, insights, deep smarts, wisdom, risk management, disruptive innovation, brands, values and transformational leadership.

In this era, the name of the game won’t be command and control of “stuff” –hard material things—but an ability to master “fluff”—a capacity to change the way people think about, invest in, and pay for, immaterial things like ideas, experiences, brands, values and knowledge. In the new knowledge era, real men engineer brands, not engines.<sup>12</sup> They don’t generate electricity, they generate ideas. They don’t mine the ground for minerals: they trawl the world for new innovations. They don’t command and control: they instill values. They don’t just manage: they lead.

As of September 2006, it’s hard to see that the knowledge era has started to generate the 4% per annum gains in productivity from “applying knowledge to knowledge” that the 20<sup>th</sup> Century produced from “applying knowledge to work”. We have yet to see anything “as profound, devastating, far reaching, and unimaginable, as the Industrial Revolution”, unless it’s happening and we don’t see it. As Drucker

himself noted, productivity improvements of knowledge workers were dismal as of 1993, and it's hard to see that this has changed significantly by 2006, once you take away downsizings and outsourcings.

That may be because most corporations are still largely managing in a command-and-control mode, which basically isn't effective in the knowledge era. What remains to be seen is what will happen when more corporations learn how to lead, and systematically acquire a capacity to persuade and inspire, and change the way people think about, invest in, and pay for, immaterial things, not simply traditional management by command-and-control. What will be the productivity situation for knowledge workers then?

Much is still unclear about the unfolding knowledge era. What does seem is that what is currently being done under the label of knowledge management in terms of sharing existing knowledge will be a significant, but still relatively small, part of the apocalyptic "knowledge era" that Drucker was talking about.

One option for knowledge management is to accept this relatively small and unexciting role and do it well. The practices have largely stabilized. Certification processes can be set up. We can become more efficient at doing it. Some people are already pursuing this approach. As T.S.Eliot might say: "Dust in the air suspended will mark the place where this story ended." Total quality management encountered a similar fate around 1990 when it opted to codify its procedures.<sup>13</sup>

The alternative is for knowledge management to widen its sights to include such elements as ideas, experiences, transformational innovation, risk management, strategy, branding and values, and leadership as part of its purview and become a major player in the unfolding knowledge era. This wider domain is where the real action is going to be, where the economic game will be won or lost. It is up to knowledge management whether it wants to be a major part of it or not.

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<sup>1</sup> <http://www.creatingthe21stcentury.org/JSB14-k-sticky-leaky.html>

<sup>2</sup> [http://en.wikipedia.org/wiki/Gettier\\_problem](http://en.wikipedia.org/wiki/Gettier_problem)

<sup>3</sup> Tacit Knowledge, p.7

<sup>4</sup> *Personal Knowledge* p.88.

<sup>5</sup> For my discussion of the issues in a 1998 background paper for the World Development Report on knowledge, see [http://www.stevedenning.com/Find\\_what\\_is\\_km.html](http://www.stevedenning.com/Find_what_is_km.html)

<sup>6</sup> e.g. "Do we really understand tacit knowledge?" H. Tsoukas, 2002.  
<http://is2.lse.ac.uk/events/ESRCseminars/tsoukas.pdf>

<sup>7</sup> Brown, J.S. et al: *Storytelling in Organizations* (Butterworth Heinemann, 2004) pages 65-66.

<sup>8</sup> "Building a Knowledge Culture", presentation by Raj Datta, February 21, 2006.

<sup>9</sup> [http://www.eiu.com/site\\_info.asp?info\\_name=eiu\\_Cisco\\_Foresight\\_2020](http://www.eiu.com/site_info.asp?info_name=eiu_Cisco_Foresight_2020)

<sup>10</sup> Richard Lanham, *The Economics of Attention*

<sup>11</sup> *Post-Capitalist Society*, page 42

<sup>12</sup> Richard Lanham, *The Economics of Attention*

<sup>13</sup> E.g. in the Baldrige Award.