The Knowledge Notebook

What Do We Mean When We Say "Knowledge"?

BY LAURENCE PRUSAK

We are clearly living in a "Knowledge Age." Wherever you look, you find books, articles, programs, courses, advertisements, and degree programs using the word "knowledge" in some way to distinguish itself or its contents. This growing emphasis on knowledge derives from the more complex views of economists, sociologists, and other thinkers who have long (at least since the early 1970s) realized that the economy in the more developed world was devoted more to the production and delivery of knowledge-based products and services than to manufacturing, agriculture, mining, and other material goods. As one leading economic thinker, Paul Romer, succinctly put it, in our new economy "land, labor, and capital are being replaced by people, things, and ideas."

Knowledge has become the main engine of our productivity (and, of course, has always been the source of NASA's achievements), but we still do not have a clear, shared understanding of what the word "knowledge" means. This may seem like a minor point to some of you—just semantics—but in fact that lack of clarity has important implications. I have personally seen tens of billions of dollars spent and largely wasted by industry and governments to develop "knowledge systems" of one sort or another, systems that were touted (and still are, I assure you) as helping organizations be more efficient or effective in working with their knowledge. When queried, the consultants, vendors, and other cheerleaders for these technical knowledge "solutions" would almost always conflate knowledge and information, implying that the two words are identical or close enough to make efforts to distinguish them look like hair-splitting—not the kind of intellectual exercise a busy, time-pressured executive has time for. But the result is that those executives end up spending millions on huge "knowledge" systems that are really information or even data management structures and have little or nothing to do with knowledge.

To make sure that our knowledge investments and efforts really do support knowledge creation and use, we often have to modify our use of the word with some explanatory word or phrase: "I'm talking about tacit knowledge," or "This is about intellectual capital," or "I mean the know-how that you can't capture in a system." Part of the problem is that we English speakers have only one word—knowledge—to describe a variety of ways of knowing.

These things were actually easier to sort out in classical Greece. Aristotle had four different words to choose from to describe different aspects of our one word, knowledge. He could use the word *Episteme* when he wanted to refer to approximately what we mean by scientific knowledge (abstract, explicit, repeatable rules). *Techne* implied the skills and crafts needed to accomplish something. *Phronesis* meant practical skills like sales and management and emotional intelligence. *Metis,* more difficult to translate, was used to mean cunning and savvy—something like what we mean by "street smarts" or "knowing the ropes." It's the kind of knowledge Odysseus had thousands of years ago and a skilled politician has today.

My intention is not so much to give you a lesson in classical Greek as to point out how deficient our language is in trying to encapsulate humanity's mental capabilities in one paltry word. Those of us who try to work with knowledge and

help organizations improve their knowledge sharing and use often have to make do with dichotomies that help explain what we mean. We talk, for instance, about "explicit" versus "tacit" knowledge—that is, knowledge that can be stated in words or set down in a document versus knowledge that eludes capture and can only be learned by example, practice, and mentoring. Even this dichotomy is too simple and therefore misleading. All knowledge is somewhat tacit in that even the most explicit, documented manual depends on the huge amount of tacit knowledge the reader already has. And much know-how (mainly tacit) is built of know-what (mainly explicit).

Such conceptual distinctions are still very useful, however, as long as we keep them in perspective. After all, when a person is immersed in a complex task or project, she doesn't usually think, "Let's see, should I use tacit or explicit knowledge now?" or "Do I need a document, a discussion, or data at this point?" The act of doing even a simple thing calls for a huge range of tools, techniques, and understanding that are, in truth, all jumbled together in what William James called the "blooming and buzzing" of life itself.

It is only when we want to do something about knowledge on an organizational scale that we begin to run into these semantic traps and language games. Trying to "manage" knowledge is a difficult task made more difficult by the many definitions and even greater number of assumptions as to what "knowledge" actually is. This is why it is always a good idea to sit down together and do that most rare of management activities—think about what exactly are the types of knowledge you wish to work with when you start designing any project involving the development, retention, and transfer of knowledge. Once you've done that, it becomes easier to answer the less arduous questions of what form the knowledge takes, where it is located, how much value it has, and whether it can be documented or needs to be taught person-to-person or group-to-group.

For instance, some of the knowledge needed to maintain a complex piece of machinery is explicit and can be successfully documented. Performance specifications, standard tests, schedules for maintenance, the expected useful life of parts, and symptoms and solutions for many problems can be captured and shared with technicians by way of a database or manual. Many organizations do exactly that; it is a valid and valuable kind of knowledge transfer. But there is no manual that can teach someone to be a master mechanic, and attempting to write one would be a wasted effort. Such mastery involves a lot of subtle, tacit knowledge (for instance, identifying a problem by a slight change in the sound a machine makes or understanding how to approach a problem you have never exactly seen before). Organizations that recognize the kind of knowledge required for this kind of skill will understand that they need to invest in the kinds of activities that can develop it, activities including apprenticeship, mentoring, and storytelling.

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So while we won't all be forced to learn classical Greek (or even classical Chinese, which I'm told has even more terms for what we lump together as "knowledge"), we do need to be clear and careful about what we mean by "knowledge" if we want to be able to support it effectively in our organizations. Developing "meta-knowledge" (knowledge about knowledge) is important. After all, William James also said, "How do I know what I think until I see what I said?" ●