Learning and Knowing in Organizations[i]

In his Confessions, Augustus discussed a difficult concept, time. He noted that as long as no one asks what time is, we know it. But as soon as we wish to explain it to someone, we know it not. The same goes with knowledge. It is such a central concept in our thought and language that it is not easy to explain or define. Instead, our concept of knowledge is used to explain other things and concepts. Both time and knowledge are concepts that structure the whole system of meanings available to us. In themselves, they are like empty labels on which important words can be written: simultaneously totally visible and completely opaque. Beyond such central concepts there is nothing, no foundation that we could use to fix the meaning of these concepts. This is why philosophers have had such a hard time in solving the problems of knowledge.

We cannot escape the constraints of our language when we describe and discuss knowledge and knowing. I don't believe, however, that language depends on our definitions. On the contrary, most of the time we use words that we, strictly speaking, don't fully understand and which we can't exactly define.

Language moves beyond definitions by using stories, metaphors, and shared experience. The strength of human language is in the human ability to change the meaning of words, and make them speak about new meaningful realities.

Speech is an art by which we create new realities, and new possibilities for knowing reality. Using socially shared meanings in speech, we put forward our proposals for interpreting the reality. Some of these proposals become socially accepted. People become able to reflect on them, argue for them, and act according to them. In the course of time, such social meaning becomes embedded in social practice, cultural artifacts, expectations, specialization of knowledge, division of labor, tools, and, finally, concepts.

Knowledge, therefore, is not about accurate representation of objects of the external world. On a very fundamental level, perception and knowing are two names for the same activity. For a lack of better word, we could call it intelligence, or even sense-making. Knowledge tells us how things are, what they are, and why they are. We act knowingly when we act in appropriate way. The world is constructed in our perception and thought based on our needs to act in the world.

To learn new knowledge means to learn to understand the world differently and to acquire new possibilities for action. When I learn, my world changes. This changed world becomes the object of my actions.

Most of our actions and interpretations relate to social reality. This, in turn, is not something that an individual can freely change. When collective learning occurs, a new reality is shared through collective activity and communication. In the course of time, this reality becomes reflected in language, tools, social institutions, and practices. This takes

time, and depends on the specific historic contexts where the emergence of new knowledge occurs.

When we create new knowledge, it is not simply about discovering truths about an external and eternal reality; instead, reality is created at the same time as our knowledge of it. Some of this reality may become socially shared through, for example, communication and collective activity. Much of this meaningful reality we inherit from previous generations. This means that that knowledge is only partially stored in an individual mind. In general, when we create new knowledge, we create new language, social practices, material artifacts, and reality. Knowledge is diffused within social communities, and some aspects of it are stored in material artifacts that are used in the process of knowing.

Therefore, also the idea that learning can be understood as internalization of knowledge is problematic. An important consequence is that we cannot explain or understand learning or knowledge creation simply by focusing on an individual brain, mind, or person. Learning is not something that happens simply inside an individual human mind.

I don't believe we have a concept that defines what knowledge is; instead, I do believe that we may have a story that tells where knowledge comes from and where it may be going. Instead of knowledge, as a static and definable thing, we have to talk about knowing. Knowing is an active effort that relates to basic needs of living beings. In other words, knowing is not something that we can discuss without discussing memory, perception, language, social practice, culture, and action. Knowing occurs within a historic context, and it changes history. New knowledge has to be based on previous knowledge, but there is no simple objective goal where knowledge would finish its evolution, and find its final form. The world that is revealed to us through our knowing is constrained in many ways, but it is not closed.

Sometimes it seems that we need only the objective nature with its invariant laws and a single individual to create new knowledge. This, however, is an illusion. Sometimes the reality is so completely sedimented and fixed in accepted social practices that it looks like there would be only one way to interpret the world. Most clearly this is so in empirical natural sciences. The conceptual system of physics, for example, is so completely embedded in textbooks, laboratory equipment, and in the social institutions of scientific research that it may be forgotten for all practical purposes. Then we can take the body of science for granted, and focus on isolated facts, as they reveal themselves against this pre-known conceptual system and stock of knowledge.

A similar situation exists in business organizations. Most of the knowledge in an organization is so tightly embedded in the organizational practices that it is often taken for granted. Knowledge management, then, becomes information management. One could, of course, ask how exact is the match between empirical sciences and business systems, and what aspects of organizational knowledge actually can be taken for granted. This, indeed, is one of the key questions of knowledge management.

Natural scientists form a social community with its own practices and world-view. More generally, each social community produces and reproduces its own meanings and practices. In organizations, we have many such communities. They talk different languages, and interpret the world differently.

Each such community has its own stocks of knowledge, and sometimes such stocks may overlap. You may be able to say something about color using Newtonian optics. However, you cannot talk about art within physics. Knowledge about colors is different depending on the practices of the community in question.

Where a painter sees movement and emotion, a physicist sees a layer of paint. However, when a painter wants to express something using a painting, he or she needs to put paint on the canvas. Although this patch of paint means very different things to a painter than to a physicist, this same patch of paint becomes a material fact also in the physicist's reality. In this sense, the painter's actions have material implications that are outside his or her reality. The painter performs meaningful acts, but as a side effect, he or she also transforms the world outside meanings.

For all active living beings, the reality therefore exists in two different forms. The reality that is the object of our intentional acts, so to say, is the reality where meaningful and perceived objects exist and where they are available for our knowing. The other reality—maybe we could call it a transcendental world—is beyond our conceptual explanations and categorizations. Nevertheless, this transcendental world is real in the sense that it constrains our actions.

To put it in other words, my reality is not all there is. There are different ways to interpret the world. But even outside all interpretations there is reality worth speaking of. My actions have consequences that may constrain other people's actions and knowledge. The material world acts as a platform that makes it possible that alternative realities become into conflict with each other. Evolution, itself, could be seen as a process of negotiating these conflicts. Other words for this could be adaptation, learning, or knowledge creation.

In evolutionary terms, knowing is a solution of a problem that every living being faces. Knowing, perception, and cognition emerge from the very simple question that stands in front of every living being at every moment of time: in its rudimentary form, knowledge is an answer to the question what to do next, how to proceed.

Action, therefore, is that elusive thing that connects these two philosophically problematic realities of meaning and materia together. As long as a philosopher just sits in his chair thinking about the problem of knowledge, he is bound to find knowledge as something of a mystery. But as soon as she stands up and moves out to the world, knowledge and world become two aspects of the same question. In philosophical terms, ontology and epistemology become two sides of the same coin. Knowing, then, loses its character as a representation of things, and reveals its true nature as the basis of changing how things are.

When we study learning and knowing in organizations, such a conceptualization of knowledge has some interesting practical consequences.

A key problem in organizational knowledge management is how to balance learning that socializes people into existing practices and learning that creates new practices. Shared knowledge creates stability, but the creation of new knowledge creates change. Creativity is difficult for well-established organizations where managerial practice is to a large extent based on maintaining stability. Our current ideas about organizations are very much based on efficiency, repeatability and predictability. The industrial organization is often a machine that tries to get rid of unexpected and new. In the modern world, however, novelty and new knowledge have become the key factors in organizational survival. From this we might predict that a key challenge for organizational learning is not the learning of employees, in general, but learning that changes managerial practices. The problem is not about upgrading employee skills as much as it is about learning new ways to organize and manage. A challenge here, of course, is that it is infinitely easier to roll out a new training course in an organization than it is to question its routines, identity, or ways of working. Within any existing social system, socialization is easier than change, and for sure, it is less risky, at least in the short run.

The close link between knowledge and action also means that knowledge cannot easily be detached from action. Traditionally, at least in Western philosophies, knowledge has been seen as something that is far from activity, movement, concrete situation, context, and biological body. True knowledge was supposed to be independent of the knower, immaterial, and, preferably, out of context. As a result, we have now millions of electronic documents on Internet servers, waiting for someone to read them. There is very little talk about information use; instead, people easily believe that information access solves the problems of knowledge organizations and information society.

The social nature of knowledge also means that the traditional individualistic view on knowing is fundamentally misleading. This goes for educational systems that are based on the premise that learning equals transfer of knowledge into an individual learner's mind. But it also goes for organizational learning models where learning is understood simply as internalization of pre-defined skills and knowledge. Therefore, we have to understand those processes that facilitate and constrain the creation of social meaning and related practices. This, curiously enough, makes the study of communication one of the key topics in the research on learning.

To understand learning and knowing in organizations we therefore have to engage in a multidisciplinary study that combines aspects of sociology, organization theory, theory of learning, cognitive science, and philosophy. Such a study has many problems. Certainly, it is not something that anyone in right senses would recommend for an academic dissertation. However, from a very practical point of view, it seems to me that it is very difficult to formulate some fundamental questions of knowledge management and organizational learning within the traditional scientific disciplines. The problem at hand does not lie within traditional disciplines. It lies in the real world, where social activity occurs. When we cast multiple lights to the phenomenon in question, we may be able to

start to understand the shape of the problem. Together, these different perspectives construct the phenomenon we are studying, and enable us to create something that can reasonably be called scientific knowledge.

[i] Ilkka Tuomi, *lectio precursora*, Helsinki University, August 13, 1999. The opponents were professors Ikujiro Nonaka, Japan Advanced Institute for Science and Technology, and Reijo Miettinen, University of Helsinki, Center for Activity Theory and Developmental Work Research. The dissertation has been published as: *Corporate Knowledge: Theory and Practice of Intelligent Organizations*, Helsinki: Metaxis, 1999; ISBN 951-98280-0-1.